



TRANSTECH III

Transmission Service System

Part Number: 500-1100P



User Manual

UNIT EQUIPPED WITH V-2 CONTROL BOARD

TRANSTECH III

MANUAL NUMBER ZIM10-00290 Rev.0-4

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Introduction

Congratulations on your selection of the TRANSTECH 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 its cooling system lines. 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.

With the engine idling, the unit will receive the used fluid expelled by the vehicle's transmission fluid pump through one of the hoses connected to the transmission cooling system, and supplies new fluid through the second hose connected to the other side of the disconnected transmission cooling line.

It is recommended that a vehicle's transmission lubrication system according to the vehicle owner's manual to obtain the highest lubricant protection, to reduce friction from internal transmission components, and thus increase the efficiency and life span of the transmission.

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

IMPORTANT

The TRANSTECH III Transmission Service System is designed to work *EXCLUSIVELY* with transmission fluid and MotorVac brand chemicals.

Any operational failure through the use of other products (*except automatic transmission fluid*) in the TRANSTECH III System voids the manufacturer's warranty. See warranty card for details.

Overview

This manual contains all the information you need to use the TRANSTECH III system. Please make sure all technicians using the unit read this manual and have it within easy reach whenever the unit is being used.

The following is a quick reference to the information in this manual:

System Features and Functions

This chapter describes the TRANSTECH III Transmission Service System's Switches, Lights and Connections.

Safety Information

Adhere to the safety guidelines in this chapter at all times!

Before You Begin

Follow the instructions in this chapter before using the unit for the first time.

Service Procedure

This chapter contains step-by-step setup and service procedure for using the unit to drain the vehicle's transmission oil pan and/or to exchange the fluid completely.

Frequently Asked Questions

Contains helpful information to common questions.

Troubleshooting and Additional Help

Turn to this chapter in the unlikely event you have problems with your TRANSTECH III system or need additional help.

Appendices - Maintenance, Accessories, and Parts

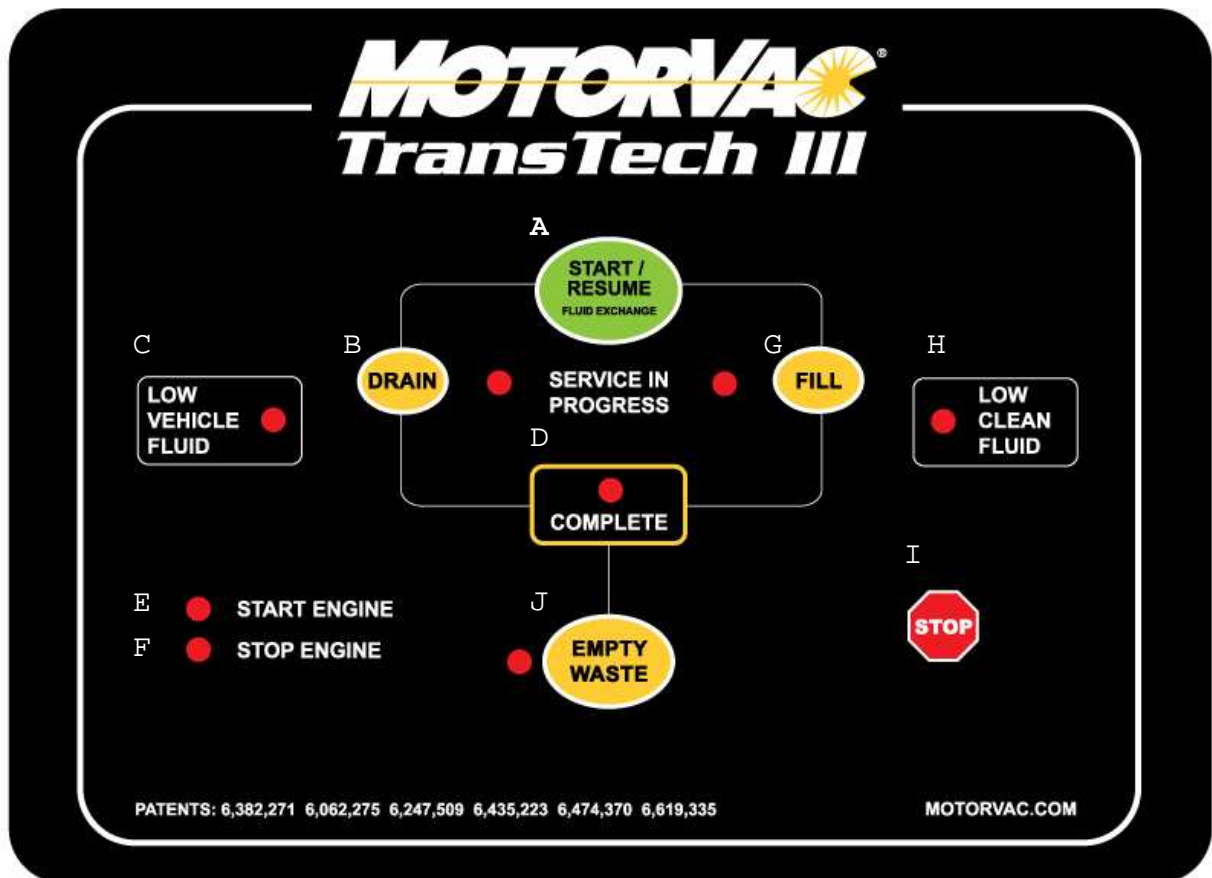
The appendices contain information regarding cleaning the filter screen, viewing available accessories and replacement parts.

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.



Front View - Control Panel Features and Functions

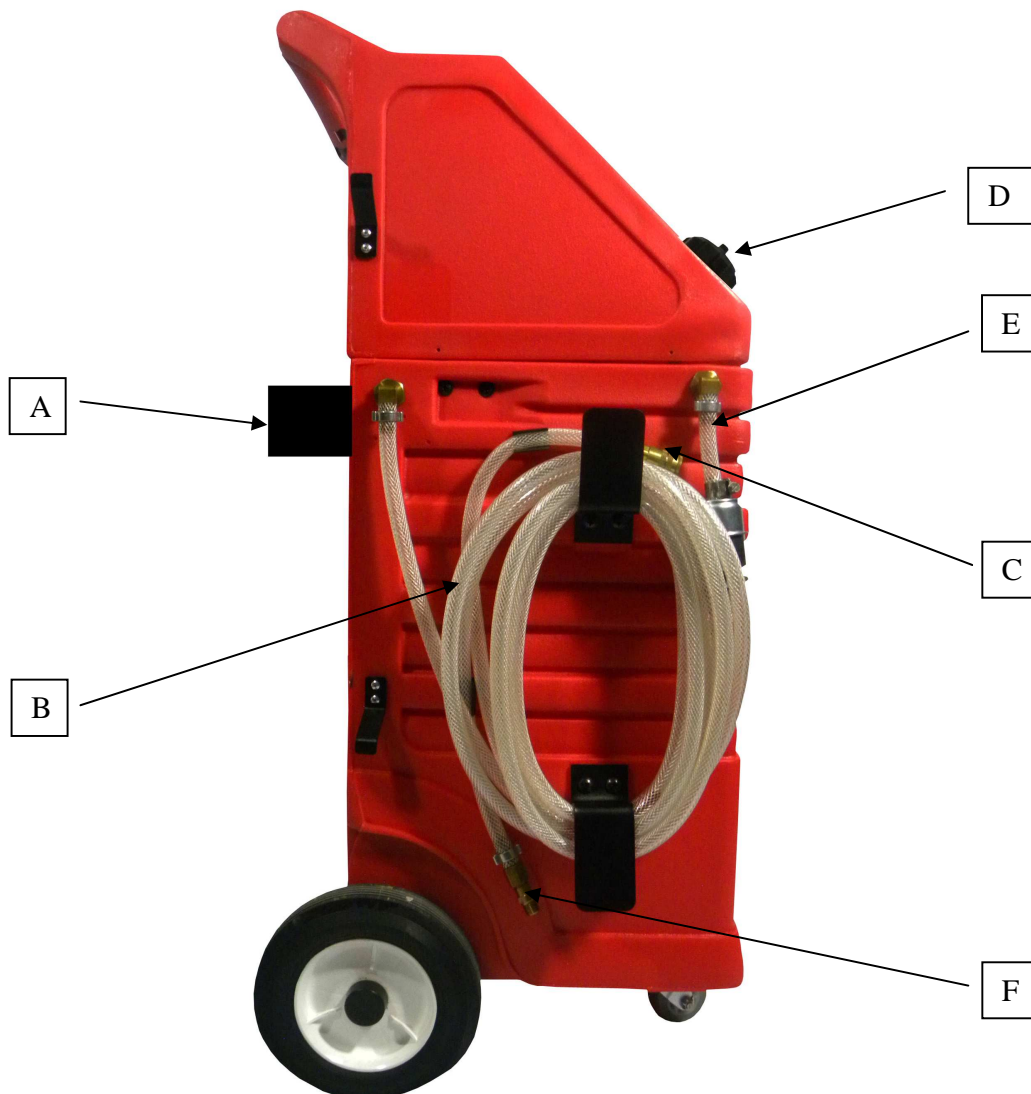


- A. Start / Resume (Fluid Exchange)** Begins service - Starts exchanging new fluid for used fluid. NOTE: With DRAIN, FILL, and ENGINE START light on, service is in progress.
- B. Drain** Drains fluid from vehicle's transmission. When performing filter change, an alarm will sound when the transmission is empty.
- C. Low Vehicle Fluid** Illuminates when fluid from the vehicle in service is low or empty.
- D. Complete** Illuminates when service is complete or the stop button has been pressed
- E. Start Engine** Flashes when the vehicle's engine needs to be started, Is on solid when the vehicle's engine is running and sufficient flow is seen from the transmission.

- | | |
|---------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| F. Stop Engine | Flashes when the vehicle's engine needs to be stopped, Is on solid when the vehicle's engine is OFF. |
| G. Fill (Top Off) | Adds fluid to the transmission. |
| H. Low Clean Fluid | Illuminates when clean fluid in the unit's clean tank is empty. |
| I. Stop | Stops alarm if alarm is sounding.
Pauses the service if alarm is not sounding. Press Change Fluid button to resume service. |
| J. Empty Waste | Empties used waste fluid from unit's waste tank. |

New Feature: Whenever the TransTech is reset with fluid in the waste tank, the Empty Waste LED will flash. Note: It is not necessary to empty the Waste Tank before performing 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!

Left View



- A. Adapter Tray** Stores machine's service adapters.
- B. Disposal Hose** Is inserted into the shop's fluid recycling container or into a suitable container for proper disposal of used transmission fluid.
- C. Quick Coupler** Secures the unit's Return hose connection to the adapter connected to the vehicle's transmission's cooling system.

D. Fill Neck Cap

Access for filling new transmission fluid into unit's clean tank.

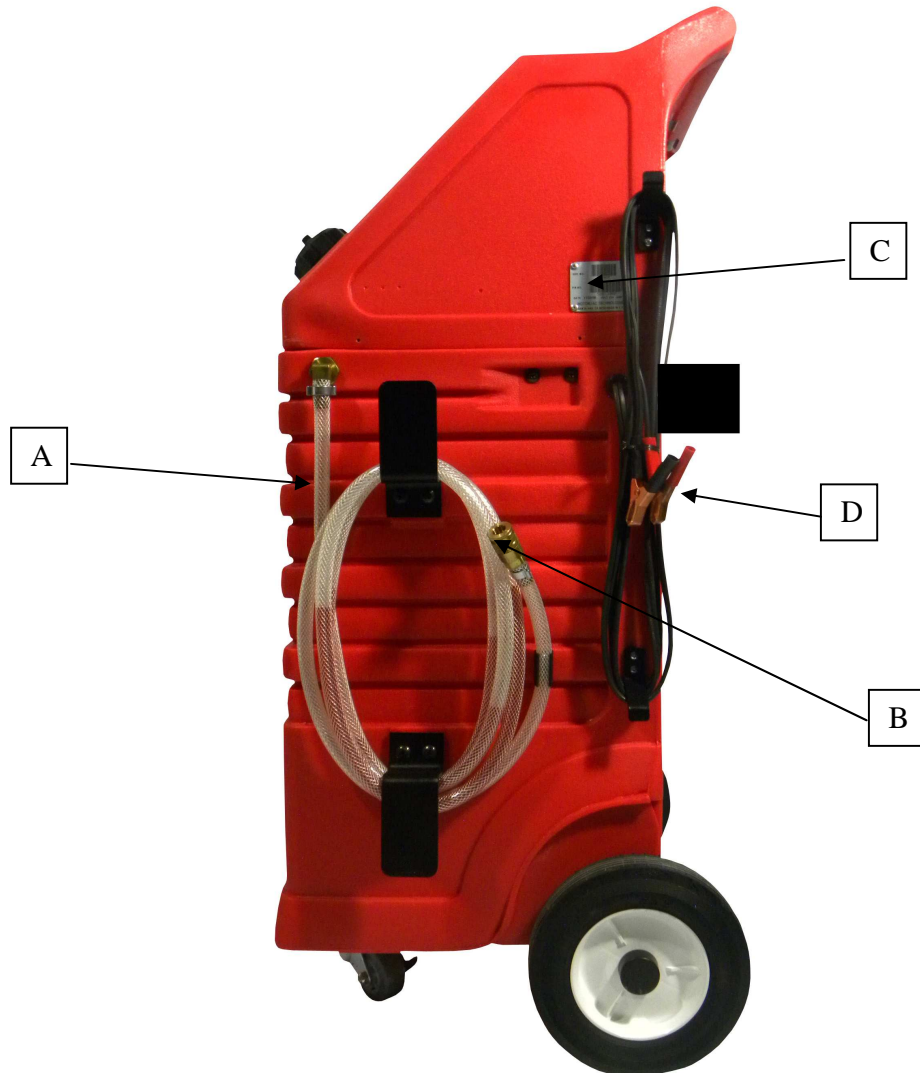
E. Return Hose

Connects transmission through its cooling system.

**F. Disposal Hose
Check Valve**

Prevents excessive drainage from waste hose, opens automatically when EMPTY WASTE button is pushed.

Right View



A. Output Hose

Connects to the transmission's cooling system.

B. Quick Coupler

Secures the unit's output hose connection to the adapter connected to the vehicle's transmission cooling system.

- C. Serial Plate** Identifies the unit's model and specific manufacturer's production number.

- D. Battery Cables** Positive (red) and negative (black) battery connections.

Theory of Operations

Descriptions of the various operations, control buttons, and indicators that make up the control panel are listed below.

OFF MODE:

- When the unit is connected to power, an alarm will sound indicating power-up, all LED's will flash on and off and then the ENGINE START light will be flashing.
- When the vehicle is started, the fluid and pressure from the vehicle should have reached the machine and the ENGINE START light will go steady on and the gauge will indicate the pressure coming in from the vehicle. It is now ready to begin a service if there is fluid in the clean fluid tank.

SERVICE MODES:

- **Push DRAIN button to perform a drain pan service on vehicle.** The unit will automatically route the used fluid from the vehicle's transmission into the unit's waste tank until the transmission is empty and the pressure drops.
- **Push CHANGE FLUID button to perform a fluid exchange.** The unit will route the used fluid from the vehicle's transmission into the unit's waste tank and supply an equal amount of new fluid from the unit's clean tank into the transmission. During the service the **ENGINE START** lights will be on steady. The **DRAIN** and **FILL** lights may go on and off periodically as the unit controls the fluid level in the vehicle.

DRAIN MODE at the end of service:

- After service is complete, (**COMPLETE** light is on), if the transmission level needs to be lowered push the **DRAIN** button. Fluid will drain only as long as the button is pressed, flow will stop when the button is released.

FILL (TOP OFF) MODE at the end of service

- Push **FILL** button after service is complete (or **COMPLETE** light is on, see step below). Fluid will flow into the vehicle's transmission only as long as button is pushed

LOW CLEAN FLUID LIGHT:

- The light will be on when the clean fluid tank is empty down to the zero mark.

COMPLETE LIGHT:

- The **COMPLETE** light will turn on at end of service. The unit will automatically revert to bypass mode.

ENGINE START LIGHT:

- The light will flash if the engine needs to be started or if fluid flow needs increased.
- The light will be on solid when the engine is running indicating good flow from the vehicle.

ENGINE STOP LIGHT:

- The light will flash if the engine needs to be stopped/turned off.
- After the engine is stopped/turned off, the light will be on steady.

EMPTY WASTE LIGHT:

A flashing empty waste LED after an exchange is complete or before one has began indicates that there is fluid in the waste tank. If the **EMPTY WASTE** button is pushed at this time the unit will empty the waste tank to the 'zero' line. Note: It is not necessary to empty the Waste Tank before performing 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!

STOP SWITCH:

- Will turn off an alarm without stopping the machine when an alarm is sounding during the CHANGE FLUID mode (when pushed only once).
- Will pause the service and revert the system to bypass mode and hold the fluid level memory when pushed without the alarm sounding. Press the **CHANGE FLUID** button to resume service.

SPECIAL CONTROL FEATURES:

PRESS AND HOLD MODES: Press and hold these buttons for five seconds to enable special functions.

RESET MACHINE: press and hold **STOP** button for 5 seconds will cause a 'reset' of the control board. (This will do the same as disconnecting the power cord).

MANUAL EMPTY WASTE: Press and hold the **EMPTY WASTE** button for 5 seconds to enable manual control of the waste pump. The alarm will sound after the 5 seconds, release the switch and the empty waste light will come on. The waste pump can then be started and stopped by touching the empty waste switch.

MANUAL DRAIN & FILL: Press and hold the **CHANGE FLUID** button for 5 seconds. The unit will beep indicating the machine is in manual mode. The **DRAIN & FILL** buttons are now active. Press and hold to activate function. When the button is released, the drain or fill function will stop.

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, hot surfaces are present during and after the vehicle's engine is running.
2. Read and understand the operator's manual before using the TRANSTECH 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 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 fully charge 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.

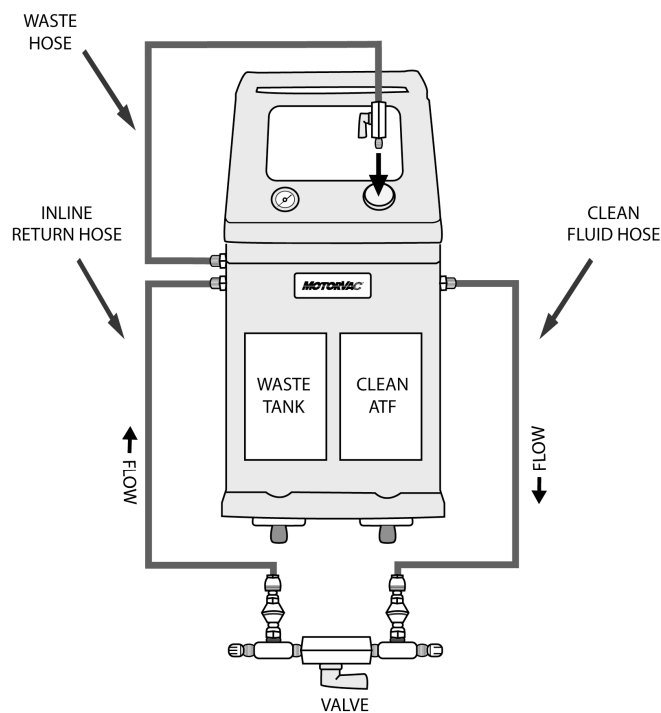
11. Always verify hose connections to the transmission's oil cooler lines before starting the vehicle's engine.
12. Explosion or flame or exposure to flammable liquid and vapors can cause injury.
13. Flammable liquid (transmission fluid) can splash out of reservoir when filling or when unit is being 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 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 effect 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.
29. The engine-cooling fan will cycle on and off depending on the coolant temperature and could operate without the engine running.
30. Wear safety goggles.
31. Always keep objects, clothing, and hands away from the cooling fans and engine parts.
32. Moving engine parts can cause injury.
33. Hot surfaces are present during and after running the engine.
34. Do not contact hot surfaces such as, manifolds, pipes, mufflers, catalytic converters, or radiators and hoses.
35. Hot surfaces can cause injury.
36. Catalytic converters become extremely hot.
37. Do not park a converter-equipped vehicle over dry grass, leaves, paper, or any other flammable material.
38. Do not touch a catalytic converter until the engine has been off for at least 45 minutes.
39. Catalytic converters can cause burns.
40. Cracked fan blade can become airborne.
41. Examine fan blades for cracks. If found, do not service the vehicle.
42. Flying objects can cause injury.
43. Batteries produce explosive gases and can explode, resulting in injury.

44. Wear safety goggles when working on or near batteries.
45. Use in a well-ventilated area.
46. Keep sparks and flames away from the battery and never lay tools, equipment, or other conductive objects on the battery.
47. 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.
48. Keep battery acid away from skin or eyes. In case of eye contact, flush with clean water for 15 minutes and get medical attention.

AUTO PRIME (For first time set-up only)

Set-Up Instructions

1. Check the output/return hoses, battery connections, and all external components for damage.
2. Fill the **CLEAN FLUID** tank with approximately 6 quarts (5.7 liters) of new ATF.
3. Connect two compatible adapters to each other, secure tightly. Attach the **CLEAN FLUID & INLINE RETURN** hoses together using the connected adapters. Ensure that both hoses have no kinks or visual damage.
4. Place the waste hose into the clean tank fill neck with the ball valve open.
5. Attach the units' red (+) battery clip to vehicle's positive battery terminal; connect the black (-) battery clip to a solid ground point as far from the battery as possible.
6. Press and hold the **CHANGE FLUID** button for 5 seconds until the unit sounds the alarm. The **FILL** and **DRAIN** LEDs will flash. Press and hold the **CHANGE FLUID** button again for 5 seconds until the unit sounds the alarm. The **DRAIN, FILL** and **COMPLETE** LEDs will cycle in a clockwise direction while the unit is performing the Auto-Prime procedure. The unit will pump fluid from the clean tank to the waste tank. The unit will then set the waste tank zero level by pumping fluid from the waste tank into the clean tank.
7. Return the hoses to their original location.
8. The initial setup is complete.



Transmission Service Procedure

Follow the steps below to connect the unit to the vehicle's transmission cooler lines. Make sure the vehicle has at least 1/8 tank of fuel before beginning this process.

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.

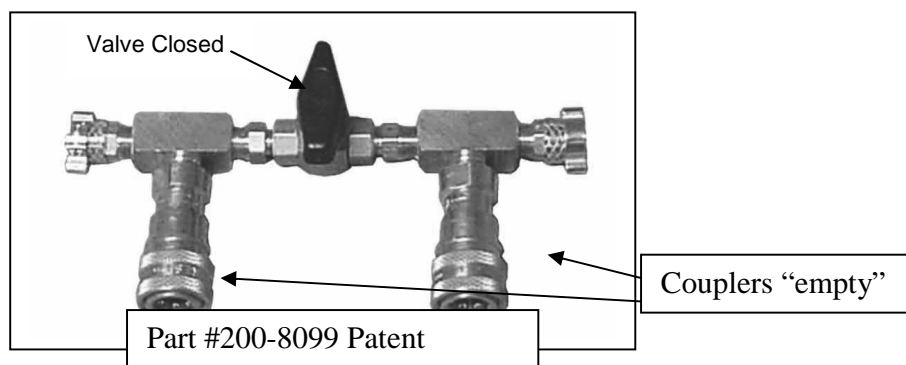
Warning! It is not necessary to empty the waste tank before beginning an exchange. If beginning an exchange with fluid in the waste tank ensure that there is less fluid in the clean tank than the remaining capacity of the waste tank. Failure to do so will result in waste tank overflowing!

1. Add the correct amount of automatic transmission fluid into the TRANSTECH'S clean tank reservoir. See chart:

APPROXIMATED FLUSH CHART	
4 Cylinder vehicle	10-12 quarts
6 Cylinder vehicle	12-14 quarts
8 Cylinder vehicle	14-16 quarts

NOTE: Quantity of fluid used per vehicle may vary depending on the condition of the fluid in the transmission being serviced. Trucks and Step Vans may have a larger transmission, therefore may use more fluid than specified in this chart.

2. Start engine, let run until it reaches operating temperature, turn engine OFF.
3. Locate and disconnect the cooler line at the easiest connection point and install adapters:
 - a) At cooler line connection to radiator. Connection is usually accessible from the top corner of the radiator (could be on either top side).
 - b) At clamped rubber hose connection to transmission cooler (connections are usually accessible from the under side of the vehicle (cooler is usually in front of radiator).
 - c) At cooler line connecting to the transmission.
4. Connect the *FLOW DIRECTION INDICATOR LOOP* ('H' adapter) to the previously attached cooler line adapters. Verify that the male to male quick disconnect is not installed in the 'H' adapter. **NOTE:** The ball valve must be in the **(CLOSED)** position. (The valve handle is at a right angle to flow.) **VERIFY THAT THE 'MALE TO MALE' NIPPLES ARE REMOVED FROM THE HYDRAULIC COUPLERS!** See photo.



5. Attach the unit to the vehicle's battery by connecting the unit's red battery clip to the positive (+) battery terminal and connecting the black (-) battery clip to a solid ground point as far from the battery as possible. The **ENGINE START** light will be flashing. **NOTE: The ENGINE START light must always be flashing before starting engine.**
6. *Start* the vehicle's engine. Note the direction of flow of the dirty fluid, (slightly open the valve if necessary) from the cooler lines (right or left side of the adapter). After determining

direction of flow, rotate the valve handle 90° (**OPEN**). Transmission flow is now in the closed loop (or bypass mode) and fluid is circulating from the vehicle, through the 'H' adapter, and back to the vehicle.

7. Attach the units hose marked "DIRTY OIL" to the fitting of the "H" adapter that indicated flow *from* the vehicle (dirty side). Attach the hose marked "CLEAN OIL" to the side of the adapter that indicated flow *to* the vehicle. (Must use male to male liquid adaptor.) Once unit's lines are connected to the "H" adapter, (**CLOSE**) the "H" adapter valve handle. See photo above. The unit is now in bypass mode (fluid flowing from the vehicle thru the TransTech unit and back to the vehicle) and is ready to begin service.
8. With the vehicle's engine still running, the ENGINE START light should be ON solid. The PRESSURE GAUGE will be reading the amount of pressure coming from the vehicle. Check the transmission fluid level. Feel the hoses for heat. Heat in both hoses will verify good bypass flow from vehicle, through the unit and back to vehicle. Transmission fluid will automatically circulate in bypass mode until service is begun. Press the **CHANGE FLUID** button. The ENGINE START light will be on solid, as will the DRAIN & FILL lights, indicating that the service is in progress. Pressure reading on the gauge may drop slightly but there should still be pressure reading on the gauge. If the gauge drops to zero when the service is started you may have the service hoses hooked up backwards.
If no bypass flow is indicated, DO NOT BEGIN SERVICE.
If the ENGINE START light is still flashing after the **CHANGE FLUID** button is pressed, bypass flow has **not** been achieved. **VERIFY good bypass flow** before beginning service. **Be aware of Low Flow Vehicles: Toyota, Chrysler, Mitsubishi, Ford Explorer and Ford Ranger** need to be in neutral, with engine rpm held at 1800 the entire service. Feel both lines for heat before pressing the **CHANGE FLUID** button.
Bypass flow must be achieved by performing one or more of the following procedures (a, b, or c). Also, see troubleshooting section page 24 for additional bypass flow information.
 - a) Verify that the vehicle's parking brake is set, and then place the gear lever in neutral.
 - b) Accelerate and hold the vehicle's engine steady at approximately 1,800 RPM.
 - c) Verify that the vehicle's parking brake is set, press and hold the vehicle's foot brake firmly then place the gear lever in **drive**. (Dodge & Jeep 4 wheel drive.)
 - d) If pressure on the gauge **drops to zero** after beginning the service the clean and dirty hoses may be installed backwards. Switch hoses & restart.
9. Verify that waste tank is filling and clean tank is emptying. Service should proceed automatically until fluid level in clean tank reaches zero level.
10. SERVICE COMPLETE light should come on and unit should switch back to 'bypass' flow. Check vehicles dipstick level and adjust if necessary.
If dipstick level is low, hold down **FILL** button to increase level.
If dipstick level is high, hold down **DRAIN** button to decrease level.
11. CHANGE FLUID Service is now complete. Turn off vehicle, disconnect adapters and power cord. Reconnect vehicles cooler lines. Restart vehicle & check for leaks.

12. Move TransTech unit to waste recycle area, Insert waste hose into waste barrel, Connect power cord to 12 volt battery. EMPTY WASTE light should be on. Press **EMPTY WASTE** button. Waste pump should run until fluid reaches zero level and then automatically shut off.

NOTE: BOTH TANKS SHOULD BE @ ZERO WHEN THE UNIT IS STORED.

Optional Transmission Filter Change:Pan Drop Style Service Procedure.

If the vehicle's transmission pan filter is to be replaced, perform the following steps.

- a) Follow steps 1 thru 7 then press the **DRAIN** button on the unit's control panel. Let the engine run until the unit's alarm sounds and the LOW VEHICLE FLUID and ENGINE STOP and ENGINE START lights are flashing. This means that the transmission has emptied most of the fluid from the transmission's fluid pan. Stop engine. Press the STOP button once to cancel alarm.

NOTE: Do not disconnect the power cord from the battery or move the Trans Tech once the service has begun.

CAUTION

Do not let the engine run for more than one minute after the Low Vehicle Fluid light has lit. Letting the transmission run for an extended period of time without fluid can cause serious damage to internal components.

- b) Replace or clean the vehicle's transmission fluid filter and reinstall the transmission's oil pan following outside manufacturer's recommendations.
- c) Press the **CHANGE FLUID** button. The unit will begin filling the vehicle's transmission corresponding to the amount of fluid previously emptied into the unit's WASTE tank.
- d) When the pan has been refilled the **START** light will flash and the alarm will sound until the vehicles engine is started and pressure is registered on the gauge. The pump will be stopped until the Start light changes to solid. After the **START** light changes to solid the **DRAIN** and **FILL** lights will be on. The fluid exchange process is then restarted and the exchange will continue until the level in the clean tank gets to zero.

Continue with the service until all fluid has been exchanged and the unit stops automatically. The **COMPLETE** light will come on and unit will beep continuously until **STOP** is pushed.

- e) Let engine run for one minute, then check the transmission's fluid level.

If level is low:

- a) When the complete light is on, and the low clean fluid light is on: Press and hold the **FILL** button for 10-15 seconds.
- b) Re-check fluid level, repeat step "a)" if necessary.

If level is high:

- a) When the complete light is on, and the low clean fluid light is on: press and hold the **DRAIN** button for 10-15 seconds.
- b) Re-check fluid level, repeat step "a)" if necessary.

13. Stop engine and let cool if necessary.
14. Disconnect hoses from TRANSTECH and connect the vehicle's cooler lines to their original connection ports.
15. Start the engine, check cooler lines for leaks, and re-tighten as necessary.
16. Step on the foot brake firmly, then slowly shift the gear lever to Low Gear (first gear) then back to Park. Do final check of transmission's fluid level.
17. Empty waste fluid tank.
18. Leave unit standing empty (to the zero mark) unit next service.

NOTE: use of the "H" flow control adapter is optional.

If you choose to hook the TransTech-III directly to the cooler lines and you do **not** have the clean and dirty hoses connected properly for the flow direction, then the pressure gauge will drop to zero and the unit will not let you start the service.

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 the clean hose coupler. Install hose into a capture container.
2. Connect power cord to a 12 volt DC source. Press the **CHANGE FLUID** for 5 seconds. The unit will beep indicating it is in manual mode.
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.

Follow these steps if it is necessary to completely empty the dirty fluid tank.

1. Connect the power cord to a 12 volt DC source.
2. Direct the waste hose to a suitable disposal container. If the EMPTY WASTE LED is on, press the **EMPTY WASTE** button. The unit will automatically pump out the dirty fluid

until the fluid level stops at the switch in the bottom of the tank. The EMPTY WASTE LED will go off.

3. 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.
4. Press and hold the **EMPTY WASTE** button. The pump will operate until the **EMPTY WASTE** button is released.
5. Tip the unit slightly backwards to let the fluid flow toward the back of the tank for complete evacuation.
6. Pressing the **STOP** button for five seconds will reset the unit.

Frequently Asked Questions

1. How is the CLEAN FLUID tank completely emptied in order to change fluid type?

The TransTech III clean tank can be completely emptied. First connect the positive battery cable to a battery's positive post. Connect the negative battery cable to the battery's negative post. Install an adapter into the unit's clean side hose. Insert the hose with adapter into a suitable container and tip the unit back slightly. Press and hold the **CHANGE FLUID** button for five seconds (DRAIN and FILL lights will blink). Control board is now in 'manual' mode. Press the **FILL** button. The pump will run until you release the **FILL** button.

2. The TransTech III seems to take longer to perform a service than when it was new.

If it appears that a service now takes longer, replace the in-line filter located in the DIRTY hose assembly. Check the cleanable screen filter (clean fluid tank) located inside the machine. This is accessed by removing the screws from the belt-line between the upper cabinet and the lower cabinet. Remove the fluid tank cap. Then carefully tip the top cabinet toward the front. The cap is 'hinged' at the front. The tank filters are located at the back on the siphon tubes between the two pumps.

3. How does the TransTech III know how much fluid to put into a vehicle?

It is up to the operator to determine the amount and type of fluid to be used for each service.

The TransTech III takes the amount of new fluid in the clean tank, flushes it through the transmission, and returns an equal amount of old used fluid in the unit's waste tank, leaving the transmission with all new, clean fluid at the same level it started with. Reference the chart on page 4-3, step 1.

4. What should I do when the machine will not perform a service?

If you are still unable to correct the problem call MotorVac Technical Support at **1-800-841-8810** for assistance.

5. Do I have to monitor the TransTech III during a service?

Although the Trans Tech III is designed to free up the operator's time, it is advisable to remain within earshot of the unit to monitor any warning beeps, should they occur.

6. On what vehicles can the TransTech III be used?

Any vehicle with transmission cooler lines that will allow the unit to adapt to it. Bear in mind that the unit is not designed to service large / heavy-duty vehicles such as buses and large trucks with Allison transmissions, etc. The Industrial TransTech should be used on these larger vehicles. Medium duty trucks, vans & smaller busses may be used with the TransTech III by using the optional flow control adapter p.n. 200-6100. By controlling the higher flow rate going into the TransTech the machine is capable of performing the 'normal' service procedure. The TransTech III pump will pump about 1 gallon per minute with ATF of 50 degrees or warmer.

7. Does the TransTech III generate pressure that could damage a vehicle in any way?

The Trans Tech III is designed to match the vehicle's rate of flow and will not harm any vehicle's transmission. This unique patented feature is found only on TransTech units.

Maintenance

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 unit's filter screens after every 100 services or 6 months, which ever comes first.

Cleaning the Unit's Filter

1. Disconnect power harness from power source.
2. Remove the eight Phillip head screws from the unit's back panel. Unsnap the lamp from back panel and set back panel aside.
3. Locate the bell shaped plastic filter housing, found at the top of each tank. A clear plastic ½" hose runs from each filter housing to a pump. **NOTE: Clean one filter at a time.**
4. Remove the lock clip from the bell shaped plastic filter. Hold the bottom half of the filter while rotating the top half of the filter *counter-clockwise* until the four lock tabs clear. Then separate the two pieces by lifting up the top half of the filter.
5. Use a fine pick or bent pin to pull screen away from the filter housing. Clean screen.
6. Assemble in reverse order. **NOTE:** Use caution not to pinch O-ring on reassembly
7. Enter initials, date, and a check mark in the appropriate boxes of the Maintenance Record section of this user manual.

Troubleshooting and Additional Help

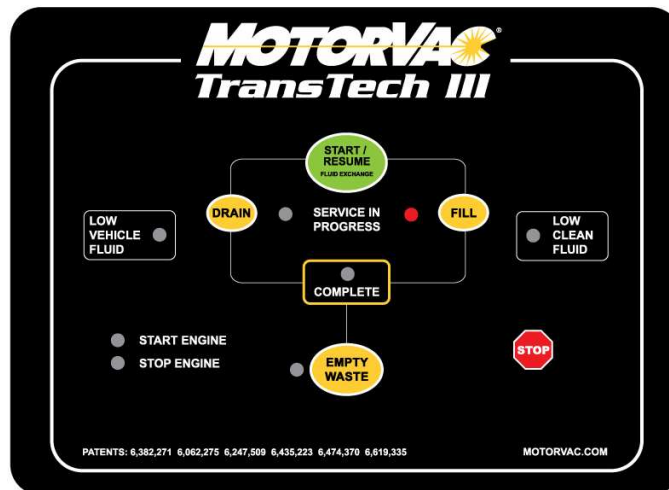
Refer to the list below troubleshooting assistance.

Problem	Possible Cause
<p>1. Unit does not power-up. No LED's are illuminated</p>	<p>Polarity is reversed on vehicle battery connection. Check connection to battery for a loose condition. Circuit breaker may be tripped. (Automatic reset). Faulty battery.</p>
<p>2. Start light does not stop blinking when the engine is started.</p>	<p>Observe pressure gauge to see if fluid/pressure is reaching the machine. CLEAN FLUID and Inlet hose may be reversed. Vehicle may have to be placed in neutral to achieve pressure. Vehicle may be of a low pressure design or have a thermostat</p>
<p>3. Fluid is not going into the Waste tank during inline service.</p>	<p>If the DRAIN LED is on (indicating unit should be draining), and there is pressure reading on the gauge, but no fluid is going into the waste tank then the solenoid valve is not 'switched'. Solenoid requires a good 12 volts. Low battery voltage, defective power cable or poor wiring connector between the board and solenoid can cause this problem.</p>
<p>4. The unit performs poorly.</p>	<p>Verify that the tank filter screen has recently been cleaned. (Refer to the maintenance log in to view dates of services performed.)</p>
<p>5. When first connected to a battery, all the unit's lights remain on and gives a steady tone.</p>	<p>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</p>
<p>6. Unit will not start. Light (LED) on below the 'fill switch'</p>	<p>Check for residual pressure on the gauge. Pressure in the dirty hose or defective pressure switch or wiring.</p>

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
<p>Fill Error</p> <p>See Figure Below.</p>	<p>The alarm sounds.</p> <p>The following LEDs flash: FILL.</p>	<p>There is a hardware or software problem that has caused the unit to lose track of how much fluid is in the Clean Tank.</p> <p>This alert prevents the unit from overfilling the transmission if there is a problem with the fluid level sensing system.</p>	<p>Empty the Clean ATF tank on the TransTech III before attempting another exchange.</p> <p>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.</p>	<p>Press STOP button to silence the buzzer.</p> <p>Due to the probability of an overfill condition, the unit cannot recover from this error. Reset the unit to attempt further operation.</p>










TransTech System Accessories

Standard Adapter kit 200-3100A: TransTech-3 Service Unit

The most common applications are listed below; other applications may apply.






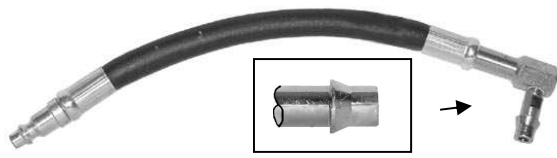
PART & NUMBER	QTY	DESCRIPTION
 060-1000	1	1/4" Male Bump Tube Most Asian Vehicles
 060-1100	1	5/16" Male Bump Tube Most Asian Vehicles
 060-1200	1	3/8" Male Bump Tube Most Asian Vehicles
 060-1300	1	1/4" Open End Hose Most Asian Vehicles
 060-1400	1	5/16" Open End Hose Most Asian Vehicles
 060-1500	1	3/8" Open End Hose Most Asian Vehicles








 <p>060-0450</p>	2	Hose Clamp 7/8" I.D. max General Application
 <p>060-1700</p>	1	5/16" Flare, 7/16"-24 Domestic Vehicles Use with 062-0170
 <p>060-1800</p>	1	3/8" Flare, 5/8"-20 Domestic Vehicles Use with 062-0180
 <p>060-3800</p>	1	#5 SAE Flare European Vehicles Use with 061-0605 & 061-0005 (optional)
 <p>062-0100</p>	1	5/16" Male Flare-Deep Ford Vehicles Use with 062-2060 (or 062-0110 in old kits)
 <p>062-0120</p>	1	3/8" Deep fitting flare male
 <p>062-2060</p>	1	5/16" Female Flare-Deep Ford Vehicles Use with 062-0100 (Replaces 062-0110)

 <p style="text-align: center;">080-0594</p>	1	<p>MQD X 3/8" FPT General Application Use with 080-0595</p>
 <p style="text-align: center;">080-0595</p>	1	<p>MQD X 3/8" MPT General Application Use with 080-0594</p>
 <p style="text-align: center;">061-0605</p>	1	<p>#5 SAE x #6 SAE Union European Vehicles Use with 062-0140 or 060-3800</p>
 <p style="text-align: center;">062-0170</p>	1	<p>5/16" Female Flare x 1/4" MPT General Application Use with 060-1700</p>
 <p style="text-align: center;">062-0180</p>	1	<p>3/8" Female Flare x 1/4" MPT General Application Use with 060-1800</p>
 <p style="text-align: center;">062-1034</p>	1	<p>Adapter, 90 Degree. 3/8" Female Inv Flare.</p>

Deluxe Adapter kit 200-3101A: TransTech IV Service Unit





The most common applications are listed below; other applications may apply.

PART & NUMBER	QTY	DESCRIPTION
 060-4200	1	5/16" Male Tube with Locking Quick Connect Dodge / Ford Vehicles Use with 060-1400
 060-4300	1	3/8" Male Tube with Locking Quick Connect Dodge / Ford Vehicles Use with 060-1500
 062-4401	1	FORD 3/8" 'double bump'
 061-1550	1	1/2" Open End Hose Chrysler V-10 Diesel Use with 062-2040
 062-2040	1	1/2" Male Tube with Locking Quick Connect Chrysler V-10 Diesel Use with 061-1550
 062-2066	1	3/8" Male Tube with Locking Quick Connect G.M. 95 & up vehicles Use with 060-1500 (Replaces 062-2050)

 <p style="text-align: center;">060-2402</p>	2	14mm x 1.5 Banjo Bolt Euro / Asia Vehicles Use with 060-2740
 <p style="text-align: right;">060-2600</p>	1	16mm Female
 <p style="text-align: center;">060-2740</p>	1	14mm x 1.5 Banjo Bolt Euro / Asia Vehicles Use with 060-2402
 <p style="text-align: center;">060-2741</p>	3	14mm Washer Euro / Asia Vehicles Use with 060-2740
 <p style="text-align: center;">060-2742</p>	1	14mm x 1.5 Cap Nut Euro / Asia Vehicles Use with 060-2740
 <p style="text-align: center;">080-0592</p>	1	MQD X 1/4" FPT General Application Use with 080-0593
 <p style="text-align: center;">062-4301</p>	1	Ford retaining clip

Optional Transmission Adapters

The following adapters are available for the TRANSTECH III. The adapters listed are not included with any configured adapter kits and are not sold in sets.

PART & NO.	APPLICATION
 <p data-bbox="379 689 724 763">062-2061 / Male Side (O-Ring P/N: 080-3602)</p>	<p data-bbox="922 577 1378 748">Volvo 850 Application Volvo V-70 All Wheel Drive Male O-Ring Type / Flange Style Counterpart Adaptor: 062-2062 (Note: One O-ring)</p>
 <p data-bbox="379 1025 651 1061">062-2062 / Female</p>	<p data-bbox="922 853 1378 994">Volvo 850 Application Volvo V-70 All Wheel Drive Female receptacle / Flange Style Counterpart Adaptor: 062-2061</p>
 <p data-bbox="379 1330 683 1397">062-2063 / Male Side (O-Ring P/N: 080-</p>	<p data-bbox="895 1173 1406 1323">Volvo 'S' Series Application Male O-Ring Type / Push Lock Style Counterpart Adaptor: 062-2064 (Note: Two O-ring)</p>
 <p data-bbox="411 1644 699 1680">062-2064 / Female Side</p>	<p data-bbox="890 1487 1410 1599">Volvo 'S' Series Application Female Receptacle / Push Lock Style Counterpart Adaptor: 062-2063</p>





Optional Transmission Adapters (Continued)

PART & NO.	APPLICATION
 <p>062-2000/ Male Side</p>	<p>BMW (Jaguar & Mercedes) 12 mm Male O-Ring Type / Flange Style Counterpart Adaptor: 062-2005</p>
 <p>062-2005 / Female Side</p>	<p>BMW (Jaguar & Mercedes) 12mm Female Receptacle / Flange Type Counterpart Adaptor: 062-2000</p>
 <p>062-2010 / Male Side (O-Ring P/N: 080-</p>	<p>BMW (Jaguar & Mercedes) 10mm Male O-Ring Type / Flange Style Counterpart Adaptor: 062-2015</p>
 <p>062-2015 / Female Side</p>	<p>BMW (Jaguar & Mercedes) 10mm Female Receptacle / Flange Style Counterpart Adaptor: 062-2010</p>
 <p>011-0003</p>	<p>Adapter "sorter" rack for drain tray.</p>


Optional Transmission Adapters (Continued)

PART & NO.	APPLICATION
 <div style="border: 1px solid black; padding: 5px; display: inline-block; margin-left: 10px;"> $\frac{3}{4}$" hose </div>	<p style="text-align: center;">ALLISON 1000 DURAMAX Female Counterpart Adaptor: 062-2069</p> <div style="border: 1px solid black; padding: 10px; text-align: center; margin: 20px auto; width: 80%;"> 062-2068A </div>
	<p style="text-align: center;">ALLISON 1000 DURAMAX Male Receptacle / Flange Type Counterpart Adaptor: 062-2068</p> <div style="border: 1px solid black; padding: 10px; text-align: center; margin: 20px auto; width: 80%;"> 062-2069 </div>
 <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>Note: Pull O'Ring from oil filter & install in the adaptor.</p> </div> <div style="border: 1px solid black; padding: 5px; display: inline-block; margin-left: 100px; margin-top: 10px;"> 062-2065 </div>	<p style="text-align: center;">ALLISON 1000 or SATURN with SPIN-ON TRANSMISSION FILTER 062-2065</p> <p>Note: O-Ring is not included with adaptor. Please remove o-ring from the old filter and install in the adaptor.</p> <p>Note: The center hole is $\frac{3}{4}$" ID x 20 thread pitch.</p>
	<p style="text-align: center;">062-2072</p> <p style="text-align: center;">G.M. (CADILLAC CTS)</p>

Optional Transmission Adapters (Continued)

PART & NO.	APPLICATION
	<p>Flow control adaptor</p> <p>200-6100</p> <p>Reduces flow from 'High-flow' vehicles – installs on Inline return fluid line between vehicle & TransTech-III unit.</p>
	<p>Flow control adapter</p> <p>200-6101</p> <p>Reduces flow from 'High-flow' vehicles – installs on 'incoming' 'dirty' fluid line between vehicle & TransTech-III unit.</p>
 <p>062-0140</p>	<p>#6 SAE Flare European Vehicles Use with 061-0605</p>
 <p>080-0593</p>	<p>MQD X 1/4" MPT General Application Use with 080-0592</p>

	<p>200-0062</p> <p>Flush tool canister. Used to put flush chemicals into transmission cooler systems. (No dipstick trans.)</p>
	<p>FORD F-350 TORQSHIFT 1/2" male deep-flare</p> <p>062-2071</p>
	<p>FORD F-350 TORQSHIFT 1/2" female deep-flare</p> <p>062-2070</p>
	<p>062-4400 'double bump' FORD 1/2 "</p>
	<p>062-2073 MERCEDES BENZ</p>

	<p>062-2074 MERCEDES BENZ</p>
	<p>061-0008 45 Flare M 1/2" #8</p>
	<p>061-0010 45 Flare M 5/8" #10</p>
	<p>061-1008 Coupler-Flare F #10 x #8</p>
	<p>065-1033 Adapter, Drain hook for oil flush</p>

	<p>060-2000 GM 7/16" Inverted Flare Male</p>
	<p>060-2005 GM 7/16" Inverted Flare Female</p>
	<p>060-2010 GM 1/2" Inverted Flare Male</p>
	<p>060-2015 GM 1/2" Inverted Flare Female</p>
	<p>060-2020 GM 1/2" Hose</p>
	<p>060-2025 VW M12</p>
	<p>060-2030 VW M12 With O-Ring</p>
	<p>060-2035 Jeep 5/8-18 Male</p>
	<p>060-2040 Jeep 5/8-18 Female</p>
	<p>060-2045 Jeep SAE J512 45 degree Flare 5/8 Male</p>
	<p>060-2050 Jeep SAE J512 45 degree Flare 5/8 Female</p>



060-2055
Ford SAE J512 45 degree
Flare 3/4 Female



060-2060
Ford SAE J512 45 degree
Flare 3/4 Male

Appendix C – Parts

**Service Parts for the TRANSTECH III Transmission System.
Please refer to the part numbers below when ordering parts.**

<u>Part #</u>	<u>Description</u>
010-0027	Wheel (8 x 1.75)
040-0604	Cap Nut (½" ID – Push On)
040-0507	Axle Bushing (Black Nylon)
010-5500	Axle, Rear Wheels (½" x 20.875 lg.)
010-6100	Swivel caster
010-6101	Swivel caster with brake lock
010-5004	Hose bracket
010-5602	Adapter tray
010-1052	Bottle for adaptor tray
011-0003	Adapter Tray Assembly TTIV
040-1200	Screw 5/8 php x #6 (for adapter box)
040-2000	Flat washer #6 (for adapter box)
040-2200	Threaded Standoff (for adapter box)
010-6060	Reservoir cap
020-8043	Harness, External Power
200-1604	Internal Light / LED type
040-0613	Screw, Phillips, stainless steel 6-32 (Rear panel)
040-0623	Screw, Allen Head, 8-32 x 5/8 (Control Panel)
050-1000	Screen filter inline ½ MPT. Pp.
200-8665	Output/Return hose assembly / Clear - braided (ONE)
080-0236	Female Quick Disconnect, ¼ m / barb, Brass
080-6009	Hose Clamp, (Crimp Style, Steel)
200-8612	Disposal hose assembly
050-1928	Filter for "Dirty" hose assembly.(Wix #33097)
200-9001	Pressure Gauge Assembly (0-160 psi.)
050-0011	Gauge (Only)
050-1915	Lens (Only)
200-8906	Quick Reference Card
200-3100A	Adapter Kit (Standard)
200-3101A	Adapter Kit (Deluxe)
200-8643	Assembly Check Valve Clean Pump TTIII
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.**