

TABLE OF CONTENTS

I. INTRODUCTION to the ADVANTAGE MULTI-MODE	2
II. SAFETY INFORMATION	3
- Section 1.01: Important Safety Notice	3
- Section 1.02: Important Safety Instructions	5
III. SYSTEM FEATURES & SPECIFICATIONS	9
- Section 2.01: Features.....	9
- Section 2.02: Dimensions & Technical Specifications.....	10
- Section 2.03: Machine Overview.....	11
- Section 2.04: Control Panel Overview.....	12
IV. OPERATING PROCEDURES	15
- Section 3.01: Tool Usage / Battery Voltage Chart.....	15
- Section 3.02: Overview of ADVANTAGE MULTI-MODE – Modes of Transmission Fluid Exchange	16
- Section 3.03: Dipstick Mode	18
- Section 3.04: Dipstick/Cooler Mode	20
- Section 3.05: Cooler Line Mode.....	23
- Section 3.06: Manual/Top Off Mode	25
- Section 3.07: Drain Waste Tank Mode	27
- Section 3.08: Total Count	28
V. TROUBLESHOOTING & ADDITIONAL HELP.....	29
- Section 4.01: Troubleshooting Guide	29
APPENDIX A - ADAPTERS	31
- Section 5.01: Adapters	31
APPENDIX B - REPLACEMENT PARTS	33
- Section 5.02: Replacement Parts.....	33
APPENDIX C - MAINTENANCE.....	41
- Section 6.01: Maintenance Procedures	41
WARRANTY INFORMATION	42
NOTES.....	43

I. INTRODUCTION TO ADVANTAGE MULTI-MODE

Congratulations on the purchase of your TRANS PRO system.

Congratulations on the purchase of your ADVANTAGE MULTI-MODE system.

The ADVANTAGE MULTI-MODE system is a technologically advanced fluid exchanger that allows convenient, quick, thorough, and accurate automatic transmission fluid (ATF) exchanges. Utilizing unique and visible dual wheel flow meters, it accurately monitors fluid movement to and from the transmission.

Logically arranged, the ADVANTAGE MULTI-MODE's fully electronic and intuitive control panel allows four (4) modes of operation.

- Dipstick only
- Dipstick and Cooler Line combination
- Cooler line only
- Manual / Top-off

These approaches and the high flow rate of the ADVANTAGE MULTI-MODE system allow most automatic transmission fluid exchanges within 15 minutes.

The common method of exchanging ATF through the transmission cooler lines is supplemented by "dipstick" and "dipstick/ cooler line" approaches. With these methods, used ATF in the transmission pan is first replaced by new ATF in the initial service phase. This significantly reduces dilution time, minimizes transmission fluid degradation, and optimizes the comprehensiveness of the ATF service.

Improvements in mileage, transmission life, and power delivery are typically realized as the result of periodic ATF exchanges. Recommended by most manufacturers, it should be performed periodically and at the specified intervals to maintain your vehicle's efficiencies,

II. SAFETY INFORMATION

1.01 IMPORTANT SAFETY NOTICE

For your safety, read this manual thoroughly before operating your ADVANTAGE MULTI-MODE system. Your ADVANTAGE MULTI-MODE system is intended for use by properly trained, skilled professional automotive technicians. The safety messages presented below and throughout this user's manual are reminders to the operator to exercise care when using this unit. Before using your ADVANTAGE MULTI-MODE system, always refer to and follow the safety messages and applicable service procedures provided by the manufacturer of the vehicle being serviced.

- **Read All Safety Instructions**

Read, understand and follow all safety messages and instructions in this manual. Safety messages in this section of the manual contain a signal word with a three-part message and, in some instances, an icon.

- **Signal Words**

The signal word indicates the level of the hazard in a situation:



DANGER

Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury to the operator or to bystanders.



WARNING

Indicates a potentially hazardous situation which, if not avoided, may result in death or serious injury to the operator or to bystanders.



CAUTION

Indicates a potentially hazardous situation which, if not avoided, may result in moderate or minor injury to the operator or to bystanders.

IMPORTANT

Indicates a situation which, if not avoided, may result in damage to the ADVANTAGE MULTI-MODE system or the vehicle being serviced.

- **Safety Messages**

Safety messages in this section contain three different type styles:

- Normal type states the hazard.
- **Bold type** states how to avoid the hazard.
- *Italic type* states the possible consequences of not avoiding the hazard.

- **Safety Symbols**

A safety symbol, when present, gives a graphical description of the potential hazard, and how to avoid the hazard:



Risk of Fire



Read Instructions Before Use



Risk of Explosion



Mandatory Eye Protection



Risk of Entanglement



Mandatory Protective Gloves



Dangerous Fumes



Mandatory Protective Clothing



Do Not Pull or Move

1.02 IMPORTANT SAFETY INSTRUCTIONS

DANGER



Vehicle gases contain Carbon Monoxide, which is a colorless & odorless lethal gas.

- **Only run engines in well ventilated areas and avoid breathing exhaust gases.**
Extended breathing of exhaust gases will cause serious injury or death.

WARNING



Improper use and operation.

- **Read, understand and follow all safety messages and operational procedures in this manual before operating the ADVANTAGE MULTI-MODE system.**
- **This equipment should be operated only by qualified personnel.**
- **Use this equipment only as described in this manual.**

Improper use and operation of this product can result in injury.

WARNING



Exhaust gases, moving parts, hot surfaces, and potent chemicals may be present during use of the transmission fluid exchange equipment.

- **When using chemicals and fluids always refer to the MSDS sheets and manufacturer's instructions for the proper procedure to handle emergency medical treatment, cleanup, handling, and storage requirements.**

Improper use of the equipment or exposure to exhaust gases, moving parts, hot surfaces, or moving parts may cause injury.

WARNING



Transmission systems may maintain residual pressure in lines after the engine has been turned off.

- **Wear safety glasses, chemical resistant gloves, and protective clothing when connecting and disconnecting lines and adapters.**
 - **Confirm ZERO pressure before connecting and disconnecting lines and adapters.**
- Exposure to liquids and vapors can cause injury.*

WARNING



Risk of expelling pressurized fluids.

- **Keep the service hoses away from hot or moving engine parts. Hoses can split or burst causing fluid to be expelled.**
- **Tighten all connections properly.**

Chemicals and fluids may cause respiratory tract and/or skin and eye irritation.

- **Use safety glasses and protective clothing when handling fluids.**
- **Do not ingest chemicals or breathe vapors**
- **Treatment methods are as follows:**
 - Eyes: Flush eyes with plenty of water.**
 - Skin: Wash with soap and water.**
 - Inhalation: Move to uncontaminated area.**
 - Ingestion: If large amount, get medical attention.**
 - If any irritation persists, get medical attention.**

- **Dispose of used fluid according to environmental laws and regulations.**

Although transmission fluids pose no significant health hazards, some individuals may experience adverse reactions upon contact. Pressurized fluid can cause serious injury.

WARNING



Batteries produce explosive gases and can explode.

- **Keep sparks and flames away from the battery.**
- **Do not lay tools, equipment, or other conductive items on the battery.**
- **Connect the positive lead of the equipment to the positive lead of the battery first.**
- **Connect the negative lead of the equipment to vehicle ground as far away from the battery as leads will allow to prevent sparking and igniting of battery gases.**
- **Keep battery acid away from skin and eyes. In case of eye contact, flush with clean water for 15 minutes and get medical attention.**

Battery explosion and ignited gases can cause injury.

WARNING

Risk of unexpected vehicle movement.

- **Block drive wheels before starting vehicle's engine to begin an exchange.**
- **Unless instructed otherwise, set parking brake and put gear selector in park.**
- **Do not leave a running vehicle unattended.**

A moving vehicle can cause injury.

WARNING



Engine has moving parts. Risk of entanglement.

- **Do not place tools on fenders or other places in engine compartment.**
- **Keep yourself, clothing, adapters and service hoses clear of moving parts such as fan blades, belts and pulleys.**
- **Wear safety goggles (user and bystanders).**

Moving components can cause injury.

WARNING



Risk of burns.

- **Wear gloves when working near hot engine components.**
- **Do not touch hot exhaust systems, manifolds, engines, radiators, etc.**

Hot components can cause injury or discomfort.

WARNING



Risk of injury.

- This equipment should be operated by qualified personnel only.
- Use this equipment only as described in this manual.
- Loop the power cord loosely in its proper location when machine is not in use.
- Do not operate equipment with a damaged power cord or hoses, or if the equipment has been dropped or damaged, until it has been examined by a qualified service representative.
- Care should be taken to arrange the power cord and service hoses so that they will not be tripped over or pulled.
- Never pull on the power cord or service hoses to transport the ADVANTAGE MULTI-MODE system. Damage may occur to these components, or machine may tip over.
- Keep area of operation clear of unnecessary tools and equipment. Utilize storage area on the top of the machine and drawers.
- Never leave the machine running unattended.
- The ADVANTAGE MULTI-MODE system is not designed for any other purpose than the exchanging, filling, and draining of automatic transmission fluids.

Operation of your ADVANTAGE MULTI-MODE system by anyone other than qualified personnel may result in injury.

CAUTION



Risk of equipment damage.

- Servicing, transporting, or storing this machine in an attitude other than the normal operating position can result in fluid spillage and/or component damage.
- Use only the manufacturer's recommended attachments.
- The ADVANTAGE MULTI-MODE system is fully automatic. Refer to your control panel at all times.
- Never pull on the power cord or service hoses to transport the ADVANTAGE MULTI-MODE system. Damage may occur to these components, or machine may tip over.
- Periodically clean the machine by wiping down with a clean, soft, dry cloth.

Improper operation of equipment may result in damage to machine or components.

SAVE AND FOLLOW THESE INSTRUCTIONS!

III. SYSTEM FEATURES & SPECIFICATIONS

2.01 FEATURES

Application

- Exchanges automatic transmission fluid (ATF) in most transmission systems
- Restores power delivery, helps improve fuel economy, and maximizes transmission service life.

Functions

- Intuitive, fully electronic microprocessor controlled panel with internal fuses, overload, and ground protection
- Step by step guided operation
- Simpler adapter hook ups
- User selectable modes: Dipstick, dipstick/cooler, cooler, manual, drain waste tank, and total count
- Visible signal for polarity check
- Bright seven segment LED displays function, fluid volume in and out, process progression and service count
- Board mounted LEDs display indicate available procedures and fluid direction
- Audible alarm and LED display prompt technician involvement to START service, START engine, CHECK ATF fluid level, and END service
- Waste tank level indicator
- Emergency STOP/PAUSE button (also used to "reset")

Cabinet Features

- Composite cabinet
- Ergonomically correct working height
- 8" rigid rear wheels
- 4" swivel casters with brakes
- Two large new ATF reservoirs with readily visible sight gauge
- 8' external nylon reinforced Hytron hoses
- Bi directional high flow rate pump
- Auto sensing flow valve for ATF exchanges
- Upper storage tray for adapters with convenient drained to waste tank
- Two (2) accurate readily visible dual wheel flow meters

2.02 DIMENSIONS & TECHNICAL SPECIFICATIONS

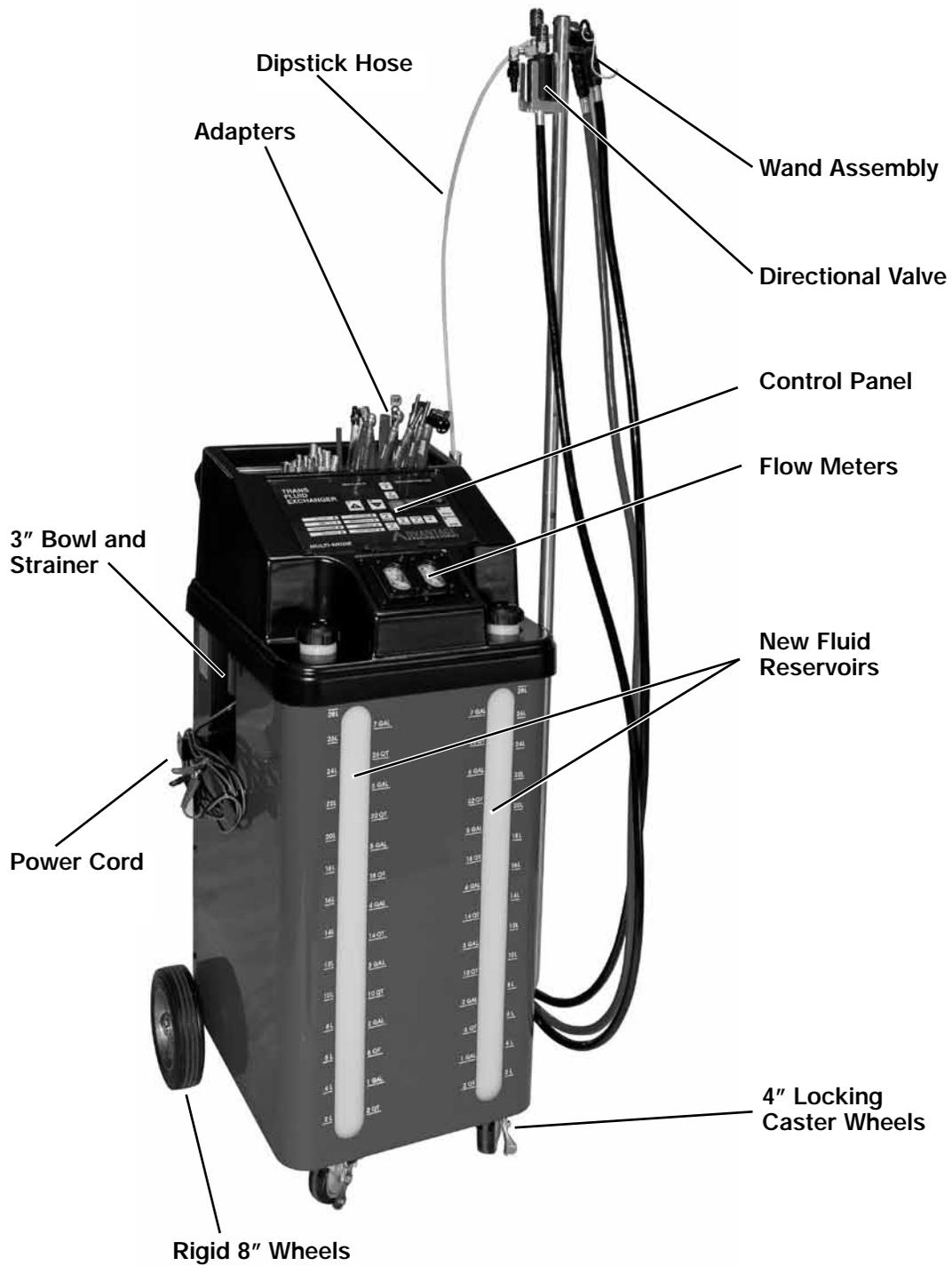
Specifications

- Two (2) eight (8) U.S. gallon tanks for new fluid with cross contamination prevention
- One (1) sixteen (16) U.S. gallon tank for used ATF
- 8' external nylon reinforced Hytron hoses
- 8" rigid rear wheels
- 4" swivel caster with brakes
- Electrical requirement: 12.0 VDC
- Weight (uncrated): 195 lbs. (89 kgs.) including adapters
- Dimensions: 18" (46 cm) wide
24" (61 cm) deep
60" (152 cm) high
- One (1) year limited warranty

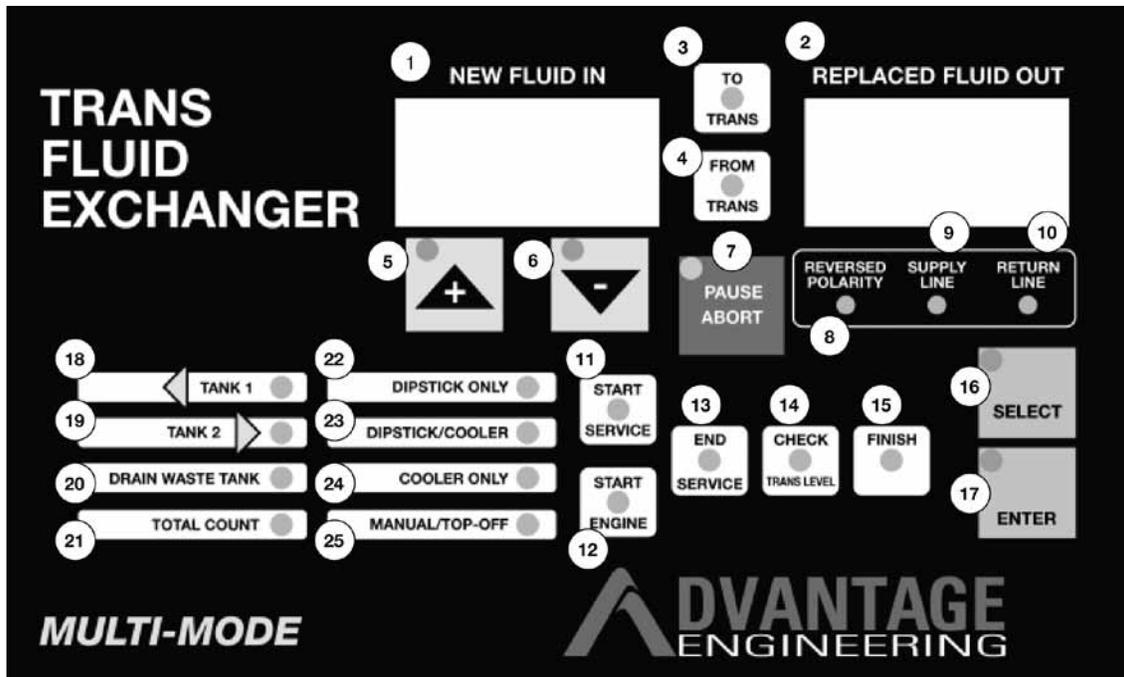
Standard Accessories

- Standard Adapter Kit
- Dipstick Wand Assembly
- Auto Sensing Directional Valve

2.03 MACHINE OVERVIEW



2.04 CONTROL PANEL OVERVIEW



2.04 CONTROL PANEL REVIEW

- 1 **NEW FLUID IN** - Display (3 digits) LED

Indicates fluid in (in tenths of a quart)
Indicates count in TOTAL COUNT mode
- 2 **REPLACED FLUID OUT** - Display (3 digits) LED

Indicates fluid out (in tenths of a quart)
Indicates count in TOTAL COUNT mode
- 3 **TO TRANS** - LED

Indicates direction of fluid
- 4 **FROM TRANS** - LED

Indicates direction of fluid
- 5 **ADD (ARROW UP)** - Button

Add volume in 1 quart increments
- 6 **SUBTRACT (ARROW DOWN)** - Button

Reduce volume in 1 quart increments
- 7 **PAUSE/ABORT** - LED

To pause, abort, or reset
- 8 **REVERSED POLARITY** - LED (red)

Lights when leads are improperly connected to 12V power source
- 9 **SUPPLY LINE** - LED (red)
- 10 **RETURN LINE** - LED (red)
- 11 **START SERVICE** - LED

Lights to prompt beginning of fluid exchange process
- 12 **START ENGINE** - LED (red)

Lights to prompt engine start during fluid exchange process
- 13 **END SERVICE** - LED (red)

Lights to prompt "stop engine" during fluid exchange process

- 14 CHECK TRANS LEVEL - LED (red)**
Lights to prompt check of transmission fluid level after fluid exchange process
- 15 FINISH – LED (red)**
Lights when service is complete
- 16 SELECT - Button (LED)**
Depress to select mode
- 17 ENTER - Button (LED)**
Depress to confirm selection
- 18 TANK 1 – LED (green)**
Lights when TANK 1, the left new ATF reservoir, is selected
- 19 TANK 2 – LED (green)**
Lights when TANK 2, the right new ATF reservoir, is selected
- 20 DRAIN WASTE TANK – LED (green)**
Lights when DRAIN WASTE TANK is selected
- 21 TOTAL COUNT – LED (green)**
Lights when TOTAL COUNT is selected
- 22 DIPSTICK ONLY – LED (green)**
Lights when DIPSTICK ONLY mode is selected
- 23 DIPSTICK/COOLER – LED (green)**
Lights when DIPSTICK/COOLER mode is selected
- 24 COOLER ONLY – LED (green)**
Lights when COOLER ONLY mode is selected
- 25 MANUAL/TOP-OFF – LED (green)**
Lights when MANUAL/TOP-OFF mode is selected

IV. OVERVIEW AND OPERATING PROCEDURES

3.01 TOOL USAGE

CAUTION

- Frequently inspect and clean any tools used, and lubricate all non-sealed ratchet mechanisms with light oil.
- The use of any other accessories not specified in this manual may create a hazard.
- Read, understand and follow Safety Instructions in the front pages of this manual and on product safety labels

BATTERY VOLTAGE CHART

VOLTAGE	% CHARGE
12.6 to 12.72 VDC	100
12.45 VDC	75
12.30 VDC	50
12.15 VDC	25
@ 80° Fahrenheit (27° Celsius)	

IMPORTANT: A charged battery is required for proper machine function.

IV. OPERATING PROCEDURES

3.02 OVERVIEW OF ADVANTAGE ENGINEERING MULTI-MODE AUTOMATIC TRANSMISSION FLUID EXCHANGER

(SEE DETAILED INSTRUCTIONS STARTING IN SECTION 3.03)

The mode selected when performing an ATF exchange may determine the comprehensiveness of the service.

Dipstick - no adapters to the cooler lines are used

Dipstick adapter is inserted into transmission's dipstick

(used ATF and new ATF are transferred through the transmission's dipstick to the transmission system with this mode)

Step 1: Technician selects the quantity of ATF to be used for the service (default is 12 quarts). Minimum is 6 quarts, maximum is 30 quarts.

Step 2: With engine off, ADVANTAGE MULTI-MODE extracts used ATF from the transmission pan through the transmission's dipstick

Step 3: With engine off, ADVANTAGE MULTI-MODE pumps back the same volume of new ATF to the transmission's pan through the transmission dipstick

Step 4: The engine is started forcing ATF to circulate through the transmission system (torque converter and cooler lines)

Step 5: ADVANTAGE MULTI-MODE extracts one (1) quart of now diluted ATF, and returns one (1) quart of new ATF through the dipstick to the transmission pan. This step is repeated until the ATF volume selected for the service is reached.

Dipstick/Cooler

(used ATF and new ATF are transferred through the transmission's dipstick to the pan initially. After the engine is started forcing circulation of the ATF through the torque converter and cooler lines, new ATF is pumped through the transmission's dipstick, diluted ATF is evacuated from the transmission system through the cooler lines with this mode)

Dipstick adapter is inserted into transmission's dipstick and appropriate adapters are attached to the in/out cooler line connectors

Step 1: Technician selects the quantity of ATF to be used for the service (default is 12 quarts). Minimum is 6 quarts, maximum is 30 quarts.

Step 2: With engine off, ADVANTAGE MULTI-MODE extracts used ATF from the transmission pan through the transmission's dipstick

Step 3: With engine off, ADVANTAGE MULTI-MODE pumps back the same volume of new ATF to the transmission's pan through the transmission dipstick

Step 4: The engine is started forcing the circulation of ATF through the transmission system (torque converter and cooler lines)

Step 5: ADVANTAGE MULTI-MODE extracts diluted ATF from the cooler line adapter and returns the same volume of new ATF through the dipstick adapter to the transmission pan. This step is repeated until the ATF volume selected for the service is reached.

Cooler

(used ATF and new ATF are transferred through the cooler lines dipstick to the transmission system with this mode)

Appropriate adapters are attached to the input and output lines of the transmission fluid cooler

Step 1: Technician selects the quantity of ATF to be used for the service (default is 12 quarts). Minimum is 6 quarts, maximum is 30 quarts.

Step 2: Engine is started. ADVANTAGE MULTI-MODE senses pressure from transmission and extracts used ATF from one of the cooler lines. ADVANTAGE MULTI-MODE pumps back the same volume through the other cooler line. This continues until the ATF volume selected for the service is reached. Once reached the auto sensing valve "shuts" allowing the fluid in the transmission system to circulate "closed."

Step 3: Engine is stopped. Adapters to coolant lines are removed. ATF fluid level is check and topped off.

Manual/Top Off

(used ATF and new ATF are transferred through the transmission's dipstick to the transmission system with this mode)

This mode is used commonly used when the transmission pan needs to be removed (to change gaskets or replace filter). It is also used to top off the ATF fluid level when necessary.

3.03 DIPSTICK MODE – OPERATING PRODECURE

(used ATF and new ATF are transferred through the transmission's dipstick to the transmission system with this mode)

NOTE: Confirm vehicle and transmission are at operating temperature before initiating service!

Power up. Connect power cord to 12.0 VDC battery. REFER TO BATTERY VOLTAGE CHART ON PAGE 15. Connect the positive lead of the equipment to the positive lead of the battery first. Connect the negative lead of the equipment to vehicle ground as far away from the battery as the leads will allow to prevent sparking and igniting of battery gases. Note: The REVERSED POLARITY LED will light if connected improperly.

NOTE: Leave dipstick tube in holder.

The MULTI-MODE will self test. The buzzer will sound, all LEDs and display segments will light briefly, and software version will be displayed. Pump will extract fluid from all lines and dipstick tube holder (this feature is designed to prevent cross contamination of fluid when selecting between tank 1 and tank 2).

Remove dipstick from transmission. Note dipstick length. Insert flexible nylon dipstick tube to length of dipstick being mindful that it may be necessary to insert slightly farther until the bottom of the pan is reached.

The SELECT key and TANK 1, TANK 2, DRAIN WASTE TANK, AND TOTAL COUNT LEDs will light and flash.

Depress the SELECT key until only the LED for the proper function is lit. (Note: The lit LED will move from option to option i.e. TANK 1, TANK 2, DRAIN WASTE TANK, and TOTAL COUNT, etc. each time it is depressed). When the LED for the appropriate tank is lit and flashing, pause for one second.

The ENTER key LED will then light and flash. Depress ENTER to confirm.

DIPSTICK ONLY LED and the SELECT key will flash. Depress the SELECT key to select the mode of service. (Note: The lit LED will move from mode to mode, i.e. DIPSTICK ONLY, DIPSTICK COOLER, COOLER ONLY, and MANUAL/TOP-OFF, etc. each time the SELECT key is depressed). When the DIPSTICK ONLY LED is lit and flashing, pause for one second.

The ENTER key LED will light and flash. Depress ENTER to confirm.

The left display indicating the quantity of new ATF for the service will show "12."

Select the quantity of ATF to be used for the service (default is 12 quarts; minimum is 6 quarts, maximum is 30 quarts). Add or subtract in one (1) quart increments by depressing the ADD (ARROW UP) or SUBTRACT (ARROW DOWN) buttons below the display. Depress ENTER key to confirm the quantity displayed.

The alarm will sound and the START SERVICE and ENTER LEDs will flash. Depress ENTER to start the ATF exchange. Fluid from selected tank is circulated through all lines to prime unit and is another step to prevent fluid cross contamination.

With engine off, ADVANTAGE MULTI-MODE extracts used ATF from the transmission pan through the transmission's dipstick until empty. The cumulative volume extracted is shown on the right display.

With engine off, ADVANTAGE MULTI-MODE pumps back the same volume of new ATF to the transmission's pan through the transmission dipstick. The cumulative volume of new fluid pumped to the transmission is shown on the left display.

The alarm will sound and the START ENGINE and ENTER LEDs will flash. Start the engine before depressing ENTER to confirm that the engine is now running.

ATF circulates through the transmission system (torque converter and cooler lines) when the engine is running.

ADVANTAGE MULTI-MODE extracts one (1) quart of now diluted ATF, and returns one (1) quart of new ATF through the dipstick to the transmission pan. The volume of extracted fluid from and new fluid pumped to the transmission are reflected on right and left displays respectively.

This step is repeated until the ATF volume selected above for the service is reached.

The buzzer will sound and the END SERVICE and ENTER LEDs will light. Confirm by depressing ENTER. CHECK TRANS LEVEL LED will light.

Check the ATF level in the pan. Remove the flexible nylon dipstick tube. Insert the dipstick and note level.

Adjust the ATF level. Depress ENTER. The TO TRANS, FROM TRANS, and FINISH LEDs will light. Depress SELECT to toggle to the appropriate function. If the level is too low depress until TO TRANS LED is lit. If too high, depress until FROM TRANS LED is lit.

Depress the ADD (ARROW UP) button. The left display will indicate a cumulative one-tenth (.1) quart adjustment each time the ADD (ARROW UP) button is depressed.

If level is satisfactory, depress until FINISH LED is lit.

Wait for one second. Depress ENTER key when it flashes to confirm the function. Depress ENTER again.

The MULTI-MODE will display SR FIN "Service Finished."

3.04 DIPSTICK/COOLER MODE – OPERATING PRODECURE

(Used ATF and new ATF are transferred through the transmission's dipstick to the pan initially. After the engine is started forcing circulation of the ATF through the torque converter and cooler lines, new ATF is pumped through the transmission's dipstick, diluted ATF is evacuated from the transmission system through the cooler lines with this mode)

NOTE: Confirm vehicle and transmission are at operating temperature before initiating service!

Power up. Connect power cord to 12.0 VDC battery. REFER TO BATTERY VOLTAGE CHART ON PAGE 15. Connect the positive lead of the equipment to the positive lead of the battery first. Connect the negative lead of the equipment to vehicle ground as far away from the battery as the leads will allow to prevent sparking and igniting of battery gases. Note: The REVERSED POLARITY LED will light if connected improperly.

NOTE: Leave dipstick tube in holder.

The ADVANTAGE MULTI-MODE will self test. The buzzer will sound, all LEDs and display segments will light briefly, and software version will be displayed. Pump will extract fluid from all lines and dipstick tube holder (this feature is designed to prevent cross contamination of fluid when selecting between tank 1 and tank 2).

Remove dipstick from transmission. Note dipstick length. Insert flexible nylon dipstick tube to length of dipstick being mindful that it may be necessary to insert slightly farther until the bottom of the pan is reached.

The SELECT key and TANK 1, TANK 2, DRAIN WASTE TANK, AND TOTAL COUNT LEDs will light and flash.

Depress the SELECT key until only the LED for the proper function is lit. (Note: The lit LED will move from option to option i.e. TANK 1, TANK 2, DRAIN WASTE TANK, and TOTAL COUNT, etc. each time it is depressed). When the LED for the appropriate tank is lit and flashing, pause for one second.

The ENTER key LED will then light and flash. Depress ENTER to confirm.

DIPSTICK ONLY, DIPSTICK/COOLER, COOLER ONLY, AND MANUAL/TOP-OFF LEDS and the SELECT key will flash. Depress the SELECT key to select the mode of service. (Note: The lit LED will move from mode to mode, i.e. DIPSTICK ONLY, DIPSTICK COOLER, COOLER ONLY, and MANUAL/TOP-OFF, etc. each time the SELECT key is depressed). When DIPSTICK COOLER LED is lit and flashing, pause for one second.

The ENTER key LED will light and flash. Depress ENTER to confirm.

The left display indicating the quantity of new ATF for the service will show "12."

Select the quantity of ATF to be used for the service (default is 12 quarts; minimum is 6 quarts, maximum is 30 quarts). Add or subtract in one (1) quart increments by depressing the ADD (ARROW UP) or SUBTRACT (ARROW DOWN) buttons below the display. Depress ENTER key to confirm the quantity displayed.

The alarm will sound and the START SERVICE and ENTER LEDs will flash. Depress ENTER to start the ATF exchange. Fluid from selected tank is circulated through all lines to prime unit and is another step to prevent fluid cross contamination.

With engine off, ADVANTAGE MULTI-MODE extracts used ATF from the transmission pan through the transmission's dipstick until empty. The cumulative volume extracted is shown on the right display.

During static portion of transmission fluid exchange, identify cooler line. Disconnect and attach appropriate adapters to the input and output connectors. These may be open hoses and/or snap or threaded fittings. Confirm that these connections are secure.

Attach adapters from input and output cooler lines to ADVANTAGE MULTI-MODE cooler line selector valve assembly.

With engine off, ADVANTAGE MULTI-MODE pumps back the same volume of new ATF to the transmission's pan through the transmission dipstick. The cumulative volume of new fluid pumped to the transmission is shown on the left display.

The alarm will sound and the START ENGINE and ENTER LEDs will flash.

Press ENTER. Start the engine.

ATF circulates through the transmission system (torque converter and cooler lines) when the engine is running.

Note: If flow from transmission is too slow, press brake pedal and shift transmission to neutral.

ADVANTAGE MULTI-MODE extracts diluted ATF from the cooler line, and returns new ATF through the dipstick to the transmission pan. The volume of extracted fluid from and new fluid pumped to the transmission are reflected on right and left displays respectively.

The ADVANTAGE MULTI-MODE has a high output pump (up to two (2) gallons/minute) and automatically adjusts flow appropriate with the volume of ATF being extracted.

This step continues until the ATF volume selected for the service is reached. END SERVICE and ENTER LEDs will light and buzzer will sound. Confirm by depressing ENTER.

CHECK TRANS LEVEL LED will flash. Check the ATF level in the pan. Remove the flexible nylon dipstick tube and return it to holder. Insert the transmission dipstick and note ATF level.

Disconnect "red" hose from the nozzle assembly and connect to the "male" fitting on the valve selector. Leave this "red" hose attached through the check fluid level phase.

Adjust the ATF level. Depress ENTER. The TO TRANS, FROM TRANS, and FINISH LEDS will light. Depress SELECT to toggle to the appropriate function. If the level is too low depress until TO TRANS LED is lit. If too high, depress until FROM TRANS LED is lit.

Depress the ADD (ARROW UP) button. The left display will indicate a cumulative one-tenth (.1) quart adjustment each time the ADD (ARROW UP) button is depressed.

If level is satisfactory, depress until FINISH LED is lit.

Wait for one second. Depress ENTER key when it flashes to confirm the function. Depress ENTER again.

The MULTI-MODE will display SR FIN "Service Finished."

3.05 COOLER ONLY MODE – OPERATING PRODECURE

Used ATF and new ATF are transferred through the cooler lines to the transmission system with this mode

NOTE: Confirm vehicle and transmission are at operating temperature before initiating service!

Power up. Connect power cord to 12.0 VDC battery. REFER TO BATTERY VOLTAGE CHART ON PAGE 15. Connect the positive lead of the equipment to the positive lead of the battery first. Connect the negative lead of the equipment to vehicle ground as far away from the battery as the leads will allow to prevent sparking and igniting of battery gases. Note: The REVERSED POLARITY LED will light if connected improperly.

The ADVANTAGE MULTI-MODE will self test. The buzzer will sound, all LEDs and display segments will light briefly, and software version will be displayed.

Identify cooler line. Disconnect and attached appropriate adapters to the input and output connectors. These may be open hoses and/or snap or threaded fittings. Confirm that these connections are secure.

Attach adapters from input and output lines from cooler line to ADVANTAGE MULTIMODE cooler line selector valve assembly. Disconnect the red line from the wand assembly and attach the red line to male fitting on the cooler line valve assembly. Attach red line to male fitting on cooler line valve assembly.

The SELECT key and TANK 1, TANK 2, DRAIN WASTE TANK, AND TOTAL COUNT LEDs will light and flash.

Depress the SELECT key until only the LED for the proper function is lit. (Note: The lit LED will move from option to option i.e. TANK 1, TANK 2, DRAIN WASTE TANK, and TOTAL COUNT, etc. each time it is depressed). When the LED for the appropriate tank is lit and flashing, pause for one second.

The ENTER key LED will then light and flash. Depress ENTER to confirm.

DIPSTICK ONLY, DIPSTICK/COOLER, COOLER ONLY, AND MANUAL/TOP-OFF LEDS and the SELECT key will flash. Depress the SELECT key to select the mode of service. (Note: The lit LED will move from mode to mode, i.e. DIPSTICK ONLY, DIPSTICK COOLER, COOLER ONLY, and MANUAL/TOP-OFF, etc. each time the SELECT key is depressed). When COOLER ONLY LED is lit and flashing, pause for one second.

The ENTER key LED will light and flash. Depress ENTER to confirm.

The left display indicating the quantity of new ATF for the service will show "12" and the ADD (ARROW UP) and SUBTRACT (ARROW DOWN) LEDs will flash.

Select the quantity of ATF to be used for the service (default is 12 quarts; minimum is 6 quarts, maximum is 30 quarts). Add or subtract in one (1) quart increments by

depressing the ADD (ARROW UP) or SUBTRACT (ARROW DOWN) buttons below the display. Press ENTER. Start the engine.

The alarm will sound and the START ENGINE and ENTER LEDs will flash.
IMPORTANT: Press ENTER before you start the engine.

ATF circulates through the transmission system (torque converter and cooler lines) when the engine is running.

ADVANTAGE MULTI-MODE senses pressure from transmission and extracts used ATF from one of the cooler lines. The ADVANTAGE MULTI-MODE has a high output pump (up to two (2) gallons/minute) and automatically adjusts flow appropriate with the volume of ATF being extracted. It pumps back the same volume through the other cooler line. This continues until the ATF volume selected for the service is reached.

Note: If flow from transmission is too slow, press brake pedal and shift transmission to neutral. Block wheels to secure vehicle in Neutral range.

The auto sensing valve "shuts" allowing the fluid in the transmission system to circulate "closed." END SERVICE LED will light and buzzer will sound. Confirm by depressing ENTER.

Check the ATF level in the pan. Remove the flexible nylon dipstick tube. Insert the dipstick and note level. CHECK TRANS LEVEL LED will light. Adjust the ATF level. Depress ENTER. The TO TRANS, FROM TRANS, and FINISH LEDs will light. Depress SELECT to toggle to the appropriate function. If the level is too low depress until TO TRANS LED is lit. If too high, depress until FROM TRANS LED is lit.

Depress the ADD (ARROW UP) button. The left display will indicate a cumulative onetenth (.1) quart adjustment each time the ADD (ARROW UP) button is depressed.

If level is satisfactory, depress until FINISH LED is lit.
Wait for one second. Depress ENTER key when it flashes to confirm the function.
Depress ENTER again.

The MULTI-MODE will display SR FIN "Service Finished."

3.06 MANUAL/TOP OFF MODE – OPERATING PRODECURE

(Used ATF and new ATF are transferred through the transmission's dipstick to the transmission system with this mode)

This mode is used commonly used when the transmission pan needs to be removed (to change gaskets or replace filter). It is also used to top off the ATF fluid level when necessary.

NOTE: Confirm vehicle and transmission are at operating temperature before initiating service!

Power up. Connect power cord to 12.0 VDC battery. REFER TO BATTERY VOLTAGE CHART ON PAGE 15. Connect the positive lead of the equipment to the positive lead of the battery first. Connect the negative lead of the equipment to vehicle ground as far away from the battery as the leads will allow to prevent sparking and igniting of battery gases.

Note: The REVERSED POLARITY LED will light if connected improperly.

The MULTI-MODE will self test. The buzzer will sound, all LEDs and display segments will light briefly, and software version will be displayed.

Remove dipstick from transmission. Note dipstick length. Insert flexible nylon dipstick tube to length of dipstick being mindful that it may be necessary to insert slightly farther until the bottom of the pan is reached.

The SELECT key and TANK 1, TANK 2, DRAIN WASTE TANK, AND TOTAL COUNT LEDs will light and flash.

Depress the SELECT key until the LED for the proper function is lit. (Note: The lit LED will move from option to option i.e. TANK 1, TANK 2, DRAIN WASTE TANK, and TOTAL COUNT, etc. each time it is depressed). When the LED for the appropriate tank is lit and flashing, pause for one second.

The ENTER key LED will then light and flash. Depress ENTER to confirm.

DIPSTICK ONLY, DIPSTICK/COOLER, COOLER ONLY, AND MANUAL/TOP-OFF LEDS and the SELECT key will flash. Depress the SELECT key to select the mode of service. (Note: The lit LED will move from mode to mode, i.e. DIPSTICK ONLY, DIPSTICK COOLER, COOLER ONLY, and MANUAL/TOP-OFF, etc. each time the SELECT key is depressed). When the MANUAL/TOP OFF LED is lit and flashing, pause for one second.

The ENTER key LED will light and flash. Depress ENTER to confirm.

The CHECK TRANS LEVEL LED will light. TO TRANS and FROM TRANS LEDs will flash. The display will also flash DRN PAN. Depress the SELECT key to toggle between these three selections. Pause when the LED for the appropriate service or the DRN PAN display is lit.

If the TO TRANS or FROM TRANS service is selected, following the procedure below.

Depress the ADD (ARROW UP) key to enter the volume of new ATF to be added (if TO TRANS is selected). This key is also used to enter the volume of ATF to be extracted (if FROM TRANS is selected). The volume for adding or extracting is measured in increments of .1 (1/10) quart.

Pause after the correct volume is selected. The ENTER key LED will light and flash. Depress ENTER to start the service.

If the DRAIN PAN is selected, follow the procedure below.

Depress ENTER to start the service.

When the TO TRANS, FROM TRANS, or DRAIN PAN service is complete the FINISH LED will light and flash. Depress ENTER to confirm.

3.07 DRAIN WASTE TANK – OPERATING PRODECURE
(Used ATF is transferred from the internal waste tank of MULTI-MODE through the drain adapter to an external waste ATF reservoir with this mode)

Attach drain adapter to red hose and place into external waste ATF reservoir.

Power up. Connect power to 12.0 VDC battery. REFER TO BATTERY VOLTAGE CHART ON PAGE 15. Connect the positive lead of the equipment to the positive lead of the battery first. Connect the negative lead of the equipment to vehicle ground as far away from the battery as the leads will allow to prevent sparking and igniting of battery gases. Note: The REVERSED POLARITY LED will light if connected improperly.

Depress the SELECT key until the LED for the proper function is lit. (Note: The lit LED will move from option to option i.e. TANK 1, TANK 2, DRAIN WASTE TANK, and TOTAL COUNT, etc. each time it is depressed). When the LED for the appropriate tank is lit and flashing, pause for one second.

The ENTER key LED will then light and flash. Depress ENTER to confirm.

DIPSTICK ONLY, DIPSTICK/COOLER, COOLER ONLY, AND MANUAL/TOP-OFF LEDS and the SELECT key will flash. Depress the SELECT key to select the mode of service. (Note: The lit LED will move from mode to mode, i.e. DIPSTICK ONLY, DIPSTICK COOLER, COOLER ONLY, and MANUAL/TOP-OFF, etc. each time the SELECT key is depressed). When the LED for the DRAIN WASTE TANK mode is lit and flashing, pause for one second.

The ENTER key LED will then light and flash. Depress ENTER to confirm.

Display will register used ATF being discharged.

The MULTI-MODE will display SR FIN “Service Finished” when the waste tank is completely drained.

3.08 TOTAL COUNT– OPERATING PRODECURE

(Used to display the number of ATF exchanges performed by the MULTI-MODE)

Power up. Connect power cord to 12.0 VDC battery. REFER TO BATTERY VOLTAGE CHART ON PAGE 15. Connect the positive lead of the equipment to the positive lead of the battery first. Connect the negative lead of the equipment to vehicle ground as far away from the battery as the leads will allow to prevent sparking and igniting of battery gases. Note: The REVERSED POLARITY LED will light if connected improperly.

Depress the SELECT key until the LED for the proper function is lit. (Note: The lit LED will move from option to option i.e. TANK 1, TANK 2, DRAIN WASTE TANK, and TOTAL COUNT, etc. each time it is depressed). When the LED for TOTAL COUNT is lit and flashing, pause for one second.

The ENTER key LED will then light and flash. Depress ENTER to confirm.

The display will show total services performed. The FINISH LED will also flash.

Depress ENTER to return to mode selection after you note the total services.

V. TROUBLESHOOTING GUIDE

4.01 TROUBLESHOOTING GUIDE

PROBLEM: Reversed Polarity LED is on and the unit is not operational

SOLUTION: Polarity is Reversed on vehicle's battery connection.
Check connection; Red to positive and Black to vehicle ground as far away from the battery as leads will allow.

PROBLEM: The unit will not power up.

SOLUTION: Check for proper connection on power leads. Verify proper voltage at battery (see Battery Voltage Chart on page 14).

NOTE: If voltage was incorrect (above 18.0 VDC) disconnect leads and reconnect to proper power source. This will reset unit.

PROBLEM: Pump is running but unit will not build pressure.

SOLUTION: Check for proper connection on power leads. Verify proper voltage at battery (see Battery Voltage Chart on page 14).

PROBLEM: Unit performs poorly.

SOLUTION:

- Check hoses for damage.
- Check power leads for cuts or frays.

PROBLEM: Does not pull fluid from transmission.

SOLUTION:

1. Verify voltage output from battery (12.6 vdc or above)
2. Verify that power leads are securely connected to battery.
3. Verify that black external hose is properly connected to wand assy.
4. Verify proper seal on dipstick tube and wand connection.
 - **Dipstick tube with nut and 2 piece ferrule:** make sure that two piece ferrule has proper orientation and nut is tight.



- **Dipstick tube with push lock fitting:** make sure that tube has proper seal in push lock fitting, remove tube from fitting and check tube OD for distortions, if distorted cut 2" of length with razorblade and reinstall.



5. Check main strainer: make sure square cut o-ring is present, strainer screen is clean and bowl is tight.

6. Disconnect the black hose from the wand assembly and look inside of it for a cross-like pin. If there is a pin inside of the black hose, remove it. Earlier models of the MMTFE came with this pin and after time it may begin to slip, preventing the valve from opening.

PROBLEM: My machine will drain the pan and then will give me an 'ERROR FLOW' message.

SOLUTION: This is probably due to a vacuum leak. If you have recently cleaned the 3" bowl and strainer, ensure that the O-ring is properly seated in the inside groove of the strainer bowl. Check all connections to make sure there is a tight seal.

Check to make sure the dipstick hose is seated to the wand assembly. Check pressure (red) and return (black) lines to make sure connections are secure.

PROBLEM: My machine won't drain.

SOLUTION: Refer to voltage chart. Connect the machine to a vehicle or another reliable 12VDC power source. While the menu is operational with less than 12VDC, the pump requires 12VDC in order to perform properly.

APPENDIX A - ADAPTERS

5.01 ADAPTERS

PART #	QTY.	DESCRIPTION	PICTURE	APPLICATION
1419-98-00-3	1	M14 CAPNUT USE WITH BANJO BOLT 6007-14-20-3		IMPORT
1602-14-00-2	3	M14 COPPER WASHER USE WITH BANJO BOLT 6007-14-20-3		IMPORT
2025-12-20-0	1	QUICK DISC. PLUG S/25 X 1/4" FPT		DOMESTIC
2025-13-20-0	2	QUICK DISC. PLUG S/25 X 1/4" MPT		DOMESTIC
2025-32-22-0	1	QUICK DISC. PLUG S/25 X 3/8" FPT		DOMESTIC
2025-33-20-0	1	QUICK DISC. PLUG S/25 X 3/8" MPT		DOMESTIC
2030-31-21-0	1	DRAIN HOSE ASSY S/48 X 9" HOSE		DRAIN WASTE TANK
2102-07-20-1	3	1/2" TO 29/32" HOSE CLAMP		GENERAL
6007-14-20-3	1	M14 BANJO BOLT (LONG)		IMPORT
6301-01-01-3	1	#6 FEMALE X SAE 45 DEG. FLARE		DOMESTIC- IMPORT
6302-02-01-3	1	5/8"-18 FEMALE X 45 DEG. INVERTED FLARE (SHORT)		DOMESTIC- IMPORT
6303-06-01-7	1	1/4"(M6) OPEN END HOSE ASSY		GENERAL
6303-08-01-7	1	5/16"(M8) OPEN END HOSE ASSY		GENERAL
6303-10-01-7	1	3/8"(M10) OPEN END HOSE ASSY		GENERAL
6303-12-01-7	1	1/2"(M12) OPEN END HOSE ASSY		GENERAL
6304-06-01-3	1	1/4"(M6) BARB ASSY		GENERAL
6304-08-01-3	1	5/16"(M8) BARB ASSY		GENERAL
6304-10-01-3	1	3/8"(M10) BARB ASSY		GENERAL
6304-12-00-4	1	1/2" PUSH ON BARB X 3/8" PUSHLOCK		GENERAL
6306-03-01-0	1	5/16" X 90 FEMALE SNAPLOCK ASSY		DOMESTIC
6306-05-01-0	2	3/8" X 90 FEMALE SNAPLOCK ASSY		DOMESTIC
6306-08-01-0	1	1/2" X 90 FEMALE SNAPLOCK ASSY		DOMESTIC
6307-03-01-3	1	5/8"-18 MALE (LONG) INVERTED FLARE		FORD
6307-04-01-3	1	5/8"-18 FEMALE X SAE INVERTED FLARE		FORD
6308-02-01-3	1	1/2"-20 FEMALE SAE INVERTED FLARE (SHORT)		DOMESTIC- IMPORT
6308-03-01-3	1	1/2"-20 FEMALE SAE INVERTED FLARE (LONG)		FORD
6308-04-01-3	1	1/2"-20 MALE SAE INVERTED FLARE (LONG)		FORD

5.01 ADAPTERS (CONTINUED)

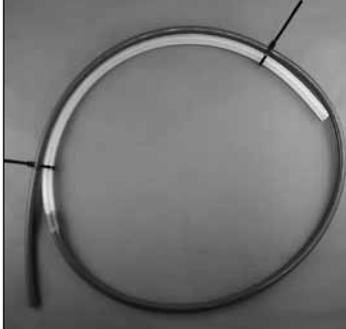
PART #	QTY.	DESCRIPTION	PICTURE	APPLICATION
6308-14-21-3	2	M14 BANJO FITTING ASSY		IMPORT
6310-10-08-3	1	3/8" MALE X 5/16" MALE SNAPLOCK		DOMESTIC-IMPORT
6310-12-01-3	1	1/2" MALE SNAPLOCK		CHRYSLER V10 DIESEL
6310-16-01-3	1	M16 FEMALE SWIVEL ASSY		IMPORT
6311-01-01-3	1	3/8" MALE ANGLE STEP SNAPLOCK		GM
6312-01-01-3	1	1/2" MALE ANGLE STEP SNAPLOCK		GM
6313-01-01-3	1	# 5 FEMALE 45 DEG. FLARE		DOMESTIC-IMPORT
6313-02-00-3	1	# 5 X # 6 SAE UNION		CHRYSLER FORD
6318-05-01-3	1	1/2"-20 MALE INVERTED FLARE (SHORT)		DOMESTIC-IMPORT
6318-06-01-3	1	5/8"-18 MALE X 45 DEG. INVERTED FLARE (SHORT)		DOMESTIC-IMPORT
6319-06-00-4	1	3/8" MALE (SMALL ANGLE STEP) SNAPLOCK		FORD

APPENDIX B - REPLACEMENT PARTS

5.02 REPLACEMENT PARTS

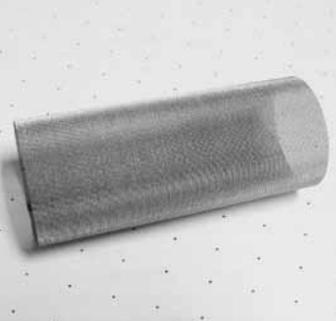
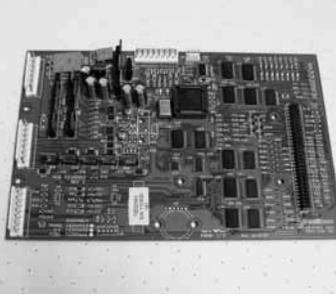
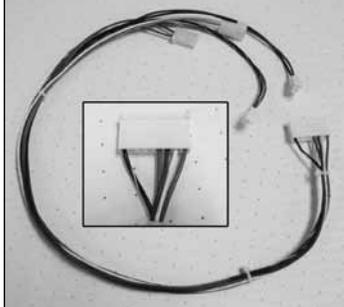
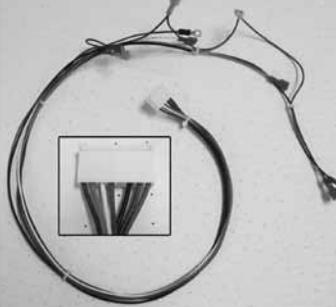
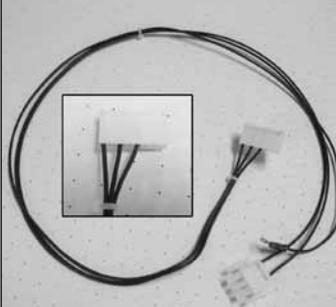
		
<p>3160-68-12-1 Audio Signal</p>	<p>2291-84-32-4 Cap, New Tank</p>	<p>3075-12-22-7 Cord/Clamp assy., 12'</p>
		
<p>5370-01-71-2 MMTFE Overlay</p>	<p>2228-09-00-4 External Strainer Bowl and O-ring</p>	<p>1635-44-40-4 Wheel, Swivel Locking Caster, 4" OD</p>
		
<p>1632-08-80-1 Wheel, 8" OD</p>	<p>2247-12-31-2 Pump, MMTFE</p>	<p>2247-12-05-0 Pump Head Assembly</p>

5.02 REPLACEMENT PARTS (CONTINUED)

		
<p>6300-00-42-5 Dipstick tube assy., 42," for push lock</p>	<p>6300-00-75-5 Dipstick tube assy., 75," for push lock</p>	<p>2228-52-12-4 Internal Strainer Housing, assy</p>
		
<p>6300-00-42-6 Dipstick Tube assy., 42"</p>	<p>6300-00-75-6 Dipstick Tube assy., 75"</p>	<p>2030-31-10-1 Quick disconnect, body (for red pressure hose)"</p>
		
<p>0901-56-92-1 Return Hose assy., 92"</p>	<p>0901-56-92-2 Pressure Hose assy., 92"</p>	

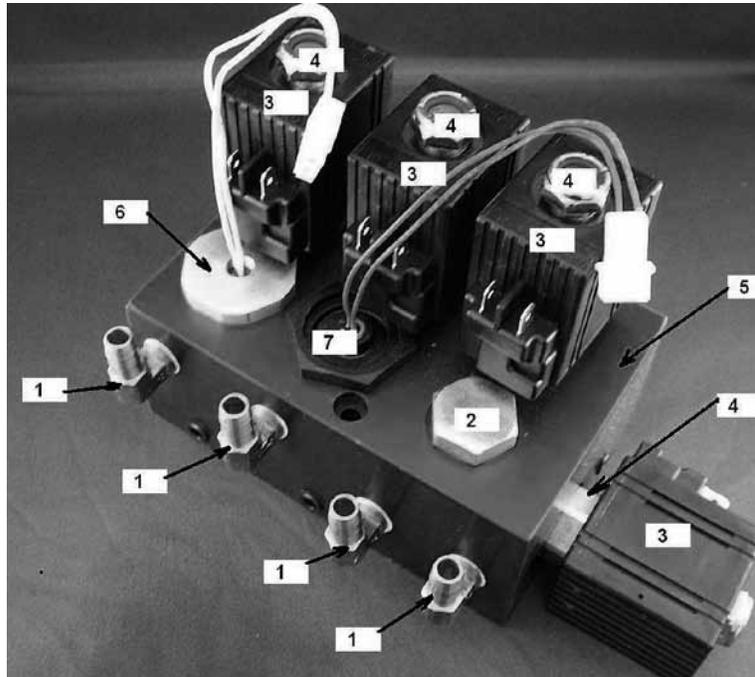
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1-877-906-1395 (U.S. AND CANADA)**

5.02 REPLACEMENT PARTS (CONTINUED)

		
<p>2228-06-00-4 Strainer, 1" Poly Bowl w/ O-Ring</p>	<p>2228-05-00-2 Mesh Strainer for 1" Bowl (internal)"</p>	<p>2228-08-00-2 Mesh Strainer for 3" Bowl (external)"</p>
		
<p>3030-10-00-0 Display Board for MMTFE</p>	<p>3030-11-00-0 Control Board for MMTFE</p>	<p>3143-20-01-0 J1 Power Harness (Trans)</p>
		
<p>3143-20-02-0 J2 Output Harness (Trans)</p>	<p>3143-20-03-0 J3 Output Harness (Trans)</p>	<p>3143-20-04-0 J4 Input Harness (Trans)</p>

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5.02 REPLACEMENT PARTS (CONTINUED)

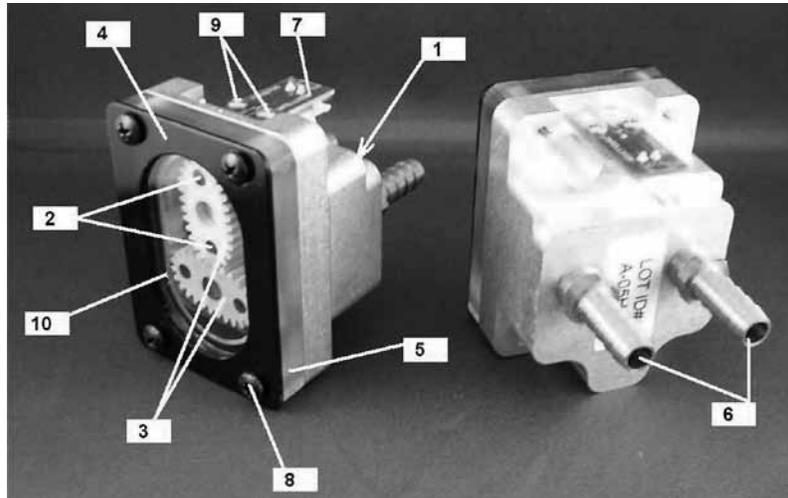


MANIFOLD BLOCK ASSY (2 TANK- MULTI MODE) 2141-97-11-0

NO.	PART NO.	DESCRIPTION	QTY
1	2354-41-14-1	FITTING, 1/4" MPT X 90 X 3/8" BARB	7
2	2140-01-20-5	CHECK VALVE 7/8-14 X 5 PSI(VITON)	1
3	2144-95-10-0	COIL, 12VDC X 20 WATT	4
4	2143-95-00-3	SOLENOID VALVE CARTRIDGE(VITON)	4
5	2141-97-00-0	MANIFOLD BLOCK	1
6	3113-72-51-0	SENSOR, NEW LEVEL (PS-1)W/BUNA FLOAT (FEMALE PINS)	1
7	3113-72-61-0	SENSOR, OLD LEVEL(PS-2)W/BUNA FLOAT (MALE PINS)	1

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1-877-906-1395 (U.S. AND CANADA)**

5.02 REPLACEMENT PARTS (CONTINUED)



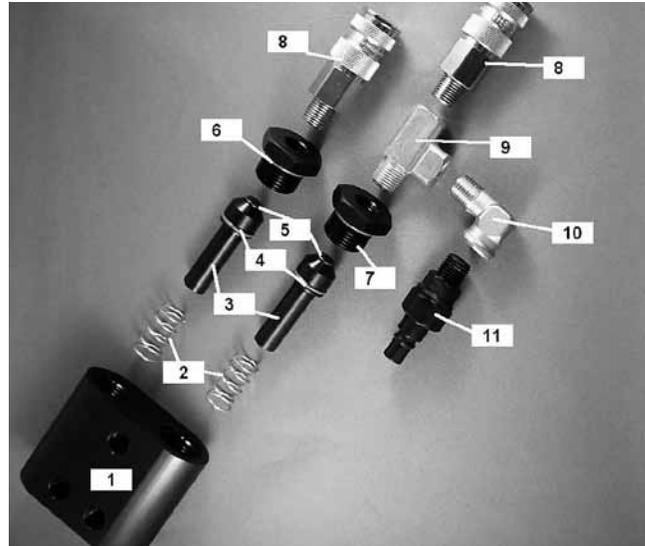
FLOW METER ASSY (BARB FITTINGS) 3107-54-21-4

NO.	PART NO.	DESCRIPTION	QTY
1	3107-54-00-4	BODY FLOW METER (TRANS ALL)	1
2	1625-40-00-8	MAGNET, CERAMIC ROD M5 X M20 LONG	2
3	1628-02-00-4	GEAR FLOW METER	2
4	5350-00-60-5	LENS SUPPORT FLOW METER (BLACK)	1
5	1628-01-00-6	LENS FLOW METER	1
6	2354-40-14-1	FITTING, 1/4" MPT X 3/8" BARB	2
7	3106-51-00-5	FLAT SENSOR FOR FLOW METER	1
8	1017-10-60-9	SCREW, 10-32" X 5/8" PHILIPS PANHEAD (BLACK)	4
9	1007-12-54-5	SCREW, 4-40" X 3/16" PANHEAD PHILIPS	2
10	6801-38-00-1	O-RING, .138 BUNA-N (BLACK)	1

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5.02 REPLACEMENT PARTS (CONTINUED)

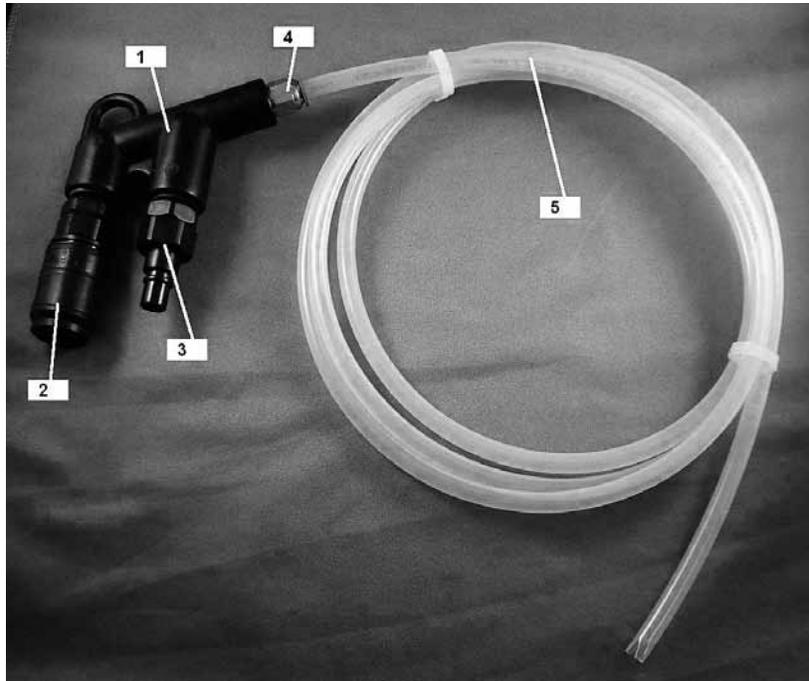
DIRECTIONAL VALVE ASSY. (DELRIN) 6350-01-91-4



NO.	PART NO.	DESCRIPTION	QTY
1	6350-02-90-4	DIRECTIONAL VALVE, BODY	1
2	1646-15-33-8	SPRING, .600 OD X .045 X 1"LONG	2
3	6350-04-90-4	DIRECTIONAL VALVE, PLUNGER	2
4	6800-15-00-2	O-RING, -015 VITON (BROWN)	2
5	6800-09-00-2	O-RING, -009 VITON (BROWN)	2
6	6801-16-00-2	O-RING, -116 VITON (BROWN)	2
7	6350-03-90-4	DIRECTIONAL VALVE, THREADED CAP	2
8	2025-13-10-2	QUICK DISC, S/25 BODY X 1/4"MPT	2
9	2441-33-30-1	TEE, 1/4"FPT X MPT X FPT	1
10	2554-54-21-1	ELBOW, 1/4"FPT X 1/4"MPT	1
11	2030-13-20-1	QUICK DISC,S/48 PLUG W/VALVE X1/4"MPT	1

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5.02 REPLACEMENT PARTS (CONTINUED)

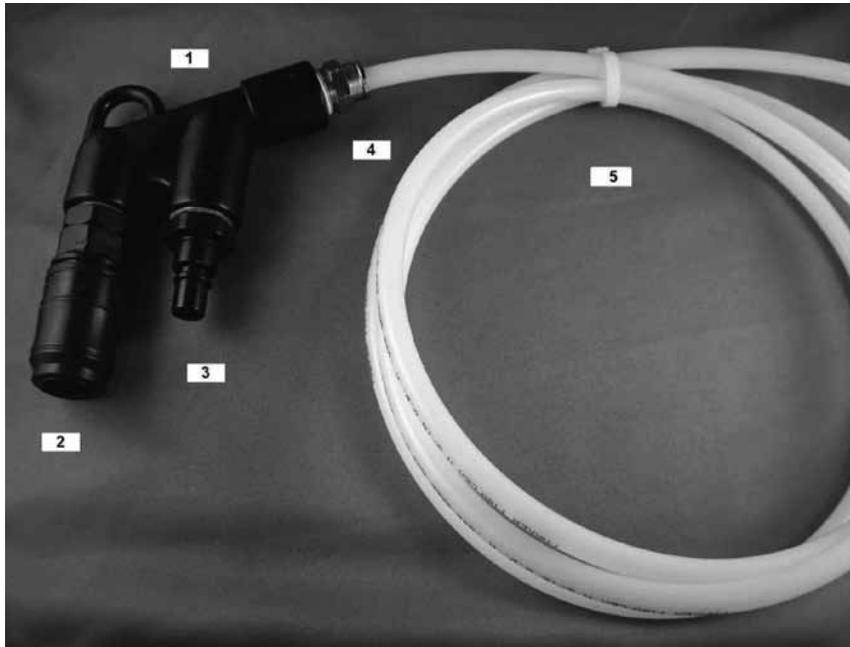


DIPSTICK WAND ASSY (DELFIN) W/75" TUBE - 6300-00-11-4

NO.	PART NO.	DESCRIPTION	QTY
1	6300-00-00-8	DIPSTICK WAND, NOZZLE 3/8" FPT (DELFIN)	1
2	2030-33-10-1	QUICK DISC, S/48 BODY X 3/8" MPT (Wand Assy)	1
3	2030-33-20-0	QUICK DISC, S/48 PLUG X 3/8" MPT (Wand Assy)	1
4	2354-10-00-8	FITTING, 1/4" MPT X 5/16" (PUSH LOCK)	1
5	6300-00-75-5	DIPSTICK TUBE 75" X 5/16" OD (CLEAR)	1

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5.02 REPLACEMENT PARTS (CONTINUED)



DIPSTICK WAND ASSY W/3/8" MPT X TWIN SEAL FITTING 6300-00-21-8

NO.	PART NO.	DESCRIPTION	QTY
1	6300-00-20-8	DIPSTICK WAND, NOZZLE 3/8" FPT X 1/4" FPT INTERNAL)	1
2	2030-33-10-1	QUICK DISC, S/48 BODY X 3/8" MPT (DELRIN)	1
3	2030-33-20-0	QUICK DISC, S/48 PLUG X 3/8" MPT (DELRIN)	1
4	2356-10-00-8	FITTING, 3/8" MPT X 5/16" HOSE (TWIN SEAL PUSHLOCK)	1
5	6300-00-75-5	DIPSTICK TUBE 75" X 5/16" OD (CLEAR)	1

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APPENDIX C - MAINTENANCE

CAUTION



- Frequently inspect and clean any tools used, and lubricate all non-sealed ratchet mechanisms with light oil.
- The use of any other accessories not specified in this manual may create a hazard.
- Read, understand and follow Safety Instructions in the front pages of this manual and on product safety labels.

6.01 MAINTENANCE PROCEDURES

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

1. Check the strainer frequently or after every 50 services.
2. Clean the exterior with a plastics cleaning agent or similar product to keep the cabinet looking new.
3. Check all hoses and wires for cuts or frays.

The unit is now ready for the next service.

LIMITED ONE (1) YEAR WARRANTY

MULTI-MODE TRANSMISSION FLUID EXCHANGER

AEC GROUP INC. warrants only to the original Purchaser that under normal use, care and service, the Equipment (except as otherwise provided herein) shall be free from defects in material and workmanship for one year from the date of original invoice. External hoses, remote control modules, adapters and all other attachments, supplies and consumables (except as otherwise provided herein) are warranted for 90 calendar days from the date of original invoice. Filter elements are not warranted.

SELLER'S OBLIGATIONS UNDER THIS WARRANTY ARE LIMITED SOLELY TO THE REPAIR OR, AT SELLER'S OPTION, REPLACEMENT OF EQUIPMENT OR PARTS WHICH TO SELLER'S SATISFACTION ARE DETERMINED TO BE DEFECTIVE AND WHICH ARE NECESSARY, IN SELLER'S JUDGEMENT, TO RETURN THE EQUIPMENT TO GOOD OPERATING CONDITION. NO OTHER WARRANTIES EXPRESS OR IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, SHALL APPLY AND ALL SUCH WARRANTIES ARE HEREBY EXPRESSLY DISCLAIMED.

This warranty does not cover (and separate charges for parts, labor and related expenses shall apply to) any damage to, malfunctioning, inoperability or improper operation of the Equipment caused by, resulting from or attributable to (A) abuse, misuse or tampering; (B) alteration, modification or adjustment of the Equipment by anyone other than Seller's authorized representatives; (D) improper or negligent use, application, operation, care, cleaning, storage or handling; (E) fire, water, wind, lightning or other natural causes; (F) adverse environmental conditions, including, without limitation, excessive heat, moisture, corrosive elements, or dust or other air contaminants, radio frequency interference, electric power failure, power line voltages beyond those specified for the equipment, unusual physical, electrical or electromagnetic stress, and/or any other condition outside of Seller's environmental specifications; (G) use of the Equipment in combination or connection with other equipment, attachments, supplies or consumables not manufactured or supplied by Seller; or (H) failure to comply with any applicable federal, state or local regulation.

Repairs or replacements qualifying under this Warranty will be performed on regular business days during Seller's normal working hours within a reasonable time following Purchaser's request. All requests for Warranty service must be made during the stated Warranty period. This warranty is non-transferable.

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