

Automatic Transmission Fluid Exchanger Operation Manual

The ATS 300 incorporates the latest micro-computer technology available today. This makes it the easiest and most accurate machine on the market. It calculates the total flow of the used ATF fluid being pumped out from the transmission and simultaneously pumps in the exact amount of new ATF fluid into the transmission. This process eliminates any possibility of over-filling the transmission.

CONNECT MACHINE TO VEHICLE

- Disconnect the exit line on the transmission cooler
- Select suitable adapters for the two disconnected open ends and connect the Supply and Drain hoses to the adapters.
- Connect the 12 volt power supply to the vehicle's battery – red to positive; black to negative
- Turn the power switch on



**Power switch & fuse are inside
in the upper part of the pocket**

- The ATS machine is automatically in circulate mode
- Start the vehicle
- Press the PSI/C/TIME button on the touch pad and read the pressure. If there is no pressure turn the vehicle off and switch the Supply and Drain hoses.
- Optional Selector Switch: If there is no pressure press the selector switch the opposite direction.
- If the pressure reading is very low – make sure vehicle transmission fluid is circulating. On the level dipstick it will say to check level in Park or Neutral.
- On Chrysler minivans select the highest pressure.

PRESSURE/FLOW/TEMPERATURE DIAGNOSIS

- Start the vehicle
- Press RESET Button on touch pad
- Press the PSI/C/TIME button, the pressure will be displayed on the touch pad
- Check manufacturer's specifications according to the transmission in vehicle (if the pressure check is not normal, too high, too low, or fluctuating erratically, turn engine off and discontinue transmission fluid exchange until problem has been identified)
- Check oil level in transmission, fill if low and drain if over full

- Press *PSI/C/TIME* button a second time to diagnose the transmission fluid temperature. To diagnose the fluid flow volume, press *PSI/C/Time* a third time. (This is accurate if the Drain (black line) is connected to the exit side of the cooler and the gear selector is positioned so that all the flow is going through the cooler). The number shown is Liters/Min.

*See conversion chart for US gal. per minute

CLEANING CYCLE & AUTO EXCHANGE

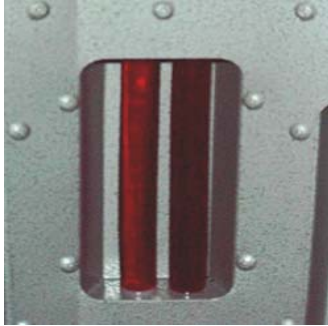
- Add transmission cleaner through the filler tube
- Press the Reset button and in quick succession press 4 times on the *PSI/C/TIME* button to be in Timer Mode. Key in the desired minutes for the cleaning cycle and *before* pressing Start, press the exchange button and key in the desired amount of fluid exchange, *then* press Start. The machine will first go through the cleaning cycle, and then will automatically go through the exchange process. (viewer on the touch pad will count down - 10 minutes is suggested)
- For optimum cleaning of the valve body, move gear selector through all the gears several times
- During this time the technician can make sure the ATS machine has enough new fluid in the tank and the used tank has enough room for the fluid exchange
- If you do not wish to use the auto exchange feature, simply press *PSI/C/Time* button 4 times and key in desired length of time. After the cleaner has been allowed to thoroughly clean the transmission and the countdown clock is finished, the ATS will be in circulate mode
- *NOTE: If you need to do a transmission filter change refer to transmission filter change procedure.*

EXCHANGE TRANSMISSION FLUID

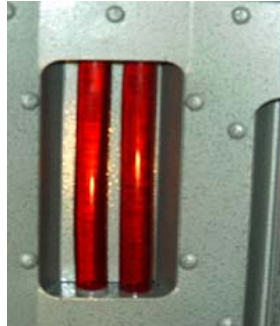
- **CAUTION! Do not have an air hose connected to the machine during exchange**
- If you do not wish to use auto exchange feature, on the touch pad, press EXCHANGE. Key in the quantity of liters/quarts you want to exchange (consult vehicle operator's manual for the transmission fluid capacities – usually exchanging 1-2 liters/quarts extra is suggested)
- Press the START button – the liters/quarts will start counting down on the viewer window
- The pump inside the ATS machine is microprocessor controlled, and it will match the old fluid coming out of the transmission with new fluid (you may hear the pump start and stop depending on the flow of the transmission)

EXCHANGE TRANSMISSION FLUID

- The two visual site tubes on the front panel will verify that all the fluid is exchanged (old and new will turn same color)



Before



After

- After exchange process is completed the machine will automatically return to circulate mode
- Check transmission level – proper level should be on the lower half of the acceptable range (with the transmission conditioner included) on the dipstick. **NOTE:** The fluid level will rise as the new ATF reaches operating temperature
- If adjustment is needed, perform required task (either drain or fill required amount to get the correct level)
- Disconnect ATS machine from vehicle


DRAINING USED OIL TANK

- Connect an air hose to the air nipple on the machine and open the ball valve at the end of the drain (grey hose)
- To set the drain tank pressure – in the large bottom pocket pull out the pressure regulator knob and turn it either **clockwise** to **increase** or **counter clockwise** to **decrease** the pressure. (The correct pressure is 7 – 8 psi)

TRANSMISSION FILTER CHANGE

- With the engine running press the DRAIN button on the touch pad on the ATS machine, 2-3 Lit/Qt of oil is usually sufficient to drain the oil pan
- The machine will return to circulate mode after required amount of oil has been drained
- Turn vehicle off and remove transmission pan and filter
- This procedure allows for an inspection of transmission wear
- Replace filter and pan
- Do not start engine
- Then press the Fill button and key in 4–5 Lit (Qt)
- Then press START, this will refill the transmission pan
- Press exchange and key in desired amount of oil, start the engine then about 10-15 second later press the START on the ATS machine

TROUBLE SHOOTING ERROR CODES

Error Code	Diagnosis	Remedy
Er "0" There is NO Pressure on the FILL Side	<ul style="list-style-type: none"> ▪ Machine may have run out of oil; ▪ Pressure sensor is not working ▪ Pressure line has come off 	<ul style="list-style-type: none"> ▪ Fill new tank & repeat procedure ▪ Call Tech Support Line
Er "1" Fill Pressure is too High	<ul style="list-style-type: none"> ▪ Not connected to vehicle properly. ▪ Some vehicles may require the fill line to be connected directly to transmission not through cooler ▪ Make sure transmission is circulating ▪ Contaminated Cooler 	<ul style="list-style-type: none"> ▪ Make sure both lines are coupled properly ▪ If Supply line is connected into transmission cooler, reconnect to exit side of cooler so you are pumping directly into transmission, not the through cooler.
Er "3" No signal from optical sensor	<ul style="list-style-type: none"> ▪ Optical sensor failure ▪ Electrical motor failure 	<ul style="list-style-type: none"> ▪ Call Tech-Support line
Er "5" Drain Pressure is too HIGH	<ul style="list-style-type: none"> ▪ Possible problem with the transmission 	<ul style="list-style-type: none"> ▪ Call Tech Support line
Er "6" Drain Pressure is too LOW	<ul style="list-style-type: none"> ▪ ATS machine may be connected to the vehicle incorrectly ▪ Transmission oil level low ▪ Possible problem with transmission ▪ Transmission filter may be plugged ▪ Sensor line pinched ▪ Pressure sensor not working 	<ul style="list-style-type: none"> ▪ Press PSI button on touch pad - if "0" pressure, refer to pg. 2 of manual ▪ Switch the blue & black hoses ▪ Make sure transmission is operating properly ▪ Call Tech-support line
 d If this appears after keying in a function & Pressing Start	<ul style="list-style-type: none"> ▪ Poor battery terminal connections, not receiving enough power to perform function 	<ul style="list-style-type: none"> ▪ Make sure connectors are making good contact to battery
Er 7	<ul style="list-style-type: none"> ▪ Temperature sensor malfunction, the machine will continue to work 	<ul style="list-style-type: none"> ▪ Change sensor for accurate exchange.

QUICK REFERENCE

- To drain fluid from transmission – press drain, quantity of fluid to be drained, then press START
- To fill transmission – press FILL, quantity of fluid, then press START
- Pressure reading – press the PSI/C/TIME button and the pressure will be displayed on the touch pad viewer
- To check transmission oil temperature – press 2 times on the PSI/C/TIME button and the temperature will be displayed
- To check transmission flow – press 3 times on the PSI/C/TIME button and the volume will be displayed
- To use auto exchange feature, immediately after keying in the desired minutes of cleaning, press the Exchange button and the desired volume, then press START
- To set cleaning circulate timer – press the PSI/C/TIME button 4 times in quick succession, key in desired time, then press START – a clock will count down in the viewer
- To exchange transmission fluid – press the exchange button once then the quantity of fluid to be exchanged from the transmission, then press START
- If error has been made during any of the above procedures, press the RESET button – then perform procedure again

FLUID FLOW CONVERSION CHART

Liters per min	US gal/per min	Liters per min	US gal/per min
1.5	.39	3.9	1.03
1.6	.42	4.0	1.05
1.7	.45	4.1	1.08
1.8	.47	4.2	1.11
1.9	.50	4.3	1.14
2.0	.53	4.4	1.16
2.1	.55	4.5	1.19
2.2	.58	4.6	1.21
2.3	.61	4.7	1.24
2.4	.63	4.8	1.27
2.5	.66	4.9	1.29
2.6	.69	5.0	1.32
2.7	.71	5.1	1.35
2.8	.74	5.2	1.37
2.9	.77	5.3	1.40
3.0	.79	5.4	1.42
3.1	.82	5.5	1.45
3.2	.85	5.6	1.48
3.3	.87	5.7	1.50
3.4	.90	5.8	1.53
3.5	.92	5.9	1.56
3.6	.95	6.0	1.58
3.7	.98	6.1	1.61
3.8	1.00	6.2	1.64