

ATS 340 E Automatic Transmission Exchanger Operation Manual



Always wear protective devices for eyes and hands when operating the ATS Machine. Always set PARKING BRAKE and install fender covers when working on a vehicle.

Prior to servicing the vehicle, test drive the vehicle to ensure proper operation.

Connect Machine to Vehicle

1. **CAUTION** Do not have shop air connected to the machine at this time.
2. Disconnect the transmission cooler line (at the radiator if possible)
3. Select the suitable adapters for the two disconnected open ends, attach the adapters, and connect the black and blue hoses From ATS 340E to the adapters.
4. Connect the 12 Volt power cord to the vehicle's battery, red to positive – black to negative.
5. The ATS machine is automatically in circulate mode.
6. Start the vehicle to check and see if Transmission is flowing. You will know the transmission is flowing if the Green/Red light is illuminated.
7. If the Light is not illuminated switch direction of the flow Switch.

Note if light is still not illuminated you may need to open the Thermostat by power braking the vehicle, to create heat. Power break at 1000/ 1200 RMP to avoid harming transmission. If this does not work there may be a way of hooking up on the vehicle to bypass the thermostat.

8. Refer to page 2 for Injector bottle instructions to inject transmission cleaner



ATS FI - Fluid Injector Bottle Instructions

1. With ball valve handle in up position (“off”) on regulator connect the air hose
2. Set regulator pressure to 30 – 40 PSI
3. Disconnect quick coupler on cap
4. Remove cap and pour transmission cleaner in canister.
5. Reinstall canister cap and quick connect back together.
6. Turn ball valve handle in down position (“on”) on regulator pressurizing the canister.
7. Open bottom ball valve below clear hose “on” until fluid is out of the clear hose.
8. Once all fluid clears out of clear hose close ball valve.

**Note Follow these same steps to install
Conditioner**

Automatic Cleaning and Exchange Procedure

- Ensure that the ATS machine has enough new fluid in the tank, and the used fluid tank has enough room to complete the fluid exchange.
- Press the **PSI/C/TIME** button 4 times in quick succession, to enter the Timer mode.
- Key in the desired minutes for the cleaning cycle (10 minutes is suggested).
- Press the **EXCHANGE** button, and key in the desired amount of fluid (Lit/QT) to be exchanged. (Check the vehicle fluid specifications, and add one or two extra Lit/QT for a thorough exchange).
- Press **START**.
- The machine will first go through the cleaning cycle, (the screen will display the count down in minutes), and then the machine will automatically complete the exchange cycle (the screen will display the countdown of the Lit/QT exchanged).
- During the cleaning cycle, ensure that the parking brake is set, then, move the gear selector of the vehicle through the gears several times to ensure cleaning of the valve body.
- The pump inside the ATS machine is microprocessor controlled, and it will match the old fluid flow with the new fluid flow (you may hear the pump start and stop depending on the flow of the Transmission).
- After exchange process is completed, the machine will automatically return to circulate mode.
- Check transmission fluid level. The proper level should be on the lower half of the acceptable range.
- Add the transmission conditioner treatment at this time. Refer back to page 2 for Fluid injector instructions NOTE: The transmission fluid level will rise as the new ATF fluid reaches operating temperature.
- If adjustment is necessary, perform required task (either drain or fill to attain the correct level - Refer to "Fill/Drain Procedure Transmission Filter Change"). NOTE: If desired, a transmission filter change can be completed at this time. Refer to "Fill/Drain Procedure Transmission Filter Change".
- Process is Complete.

After service you MUST test drive vehicle and THEN check fluid levels once again to ensure proper operating levels.

Draining the Used Fluid Tank

- Connect shop air supply to the air nipple on the machine, put the drain hose (grey hose on the back of the ATS machine) into a waste oil tank, and open the ball valve at the end of the drain (grey) hose.
- When the used fluid tank is empty, close ball valve, reconnect hose to storage hanger, and disconnect air supply.
- To set the drain tank pressure: An air regulator is located on the top panel of the machine. Pull out the pressure regulator knob, and turn it clockwise to increase pressure, or counter clockwise to decrease the pressure. (The correct pressure is 7 - 8 PSI).

Procedures to Diagnosis

Transmission

Pressure/Flow/Temperature





- Start the Vehicle
- Press Reset button on touch pad once
- Press the PSI/C/Time button on the touch pad once. This will display the transmission pressure. If there is no pressure, switch the Flow Selector switch.
- If the pressure reading is very low, make sure the vehicle transmission fluid is circulating. On the dipstick, it will say to check the level in Park or Neutral.
- Check manufacturer's specifications according to the transmission in the vehicle (if the pressure is not normal – too high, too low, or fluctuating erratically – turn the vehicle off and discontinue transmission fluid exchange until problem has been identified and rectified).
- Check the fluid level in transmission. Fill if low, and drain if over full (see Fill and Drain procedure on Page 2).
- Press PSI/C/Time button a second time to diagnose the fluid temperature.
- Press PSI/C/Time button a third time to diagnose the fluid flow volume. The number shown is in Liters/Min. *See Conversion Chart for Us gal/min

Fill / Drain Procedure Transmission

Filter Change

- Filter change is recommended according to manufacturer's suggestion or when fluid is discolored.
- With the engine running, press the **DRAIN** button on the touch pad.
- Enter the amount of fluid to be drained (2 to 3 Lit/QT is usually sufficient to drain the pan). The display is in tenths of a Lit/QT.
- Press **START**.
- The screen will display the countdown of the fluid being drained.
- The ATS machine will return to circulate mode after the desired amount of fluid has been drained.
- Turn the vehicle off, and remove the transmission pan and the filter.
- Inspect for wear and metal particulates.
- Replace the filter and pan.
- **Do Not Start Engine**
- Press the **FILL** button, and enter 4 to 5 Lit/QT of fluid to add.
- Press **START**, and the ATS machine will refill the transmission pan. The screen display will count down of the fluid as it is being pumped into the transmission.
- If you wish to complete a fluid exchange at this time, press **EXCHANGE**, key in the desired amount of fluid to be exchanged.
- **Start the vehicle now**, let the vehicle run for 10 - 15 seconds, THEN press **START** on the touch pad. The ATS machine will complete the exchange and return to circulate mode when completed.
- Check the fluid level when complete, and **FILL** or **DRAIN** to the correct level.

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
ER "1" Fill Pressure is to High connected	<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 • Making sure transmission is circulating • Contaminated Cooler 	<ul style="list-style-type: none"> • Make sure both lines are coupled properly • If supply line is into transmission cooler, reconnect to exit side of cooler so you are pumping directly into transmission, not through the cooler
ER "3" No Signal form 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" 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 Drain 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
A  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 preform function 	<ul style="list-style-type: none"> • Make sure connectors are making good contact to battery
ER 	<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/min	US gal/min	Liters/min	US gal/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

Please Call KENVO Technology

Technical Support Line 1-888-467-4142