



Fully Automatic A.T.F Changer

Installation/Operation & Maintenance Manual

■ HO-250A

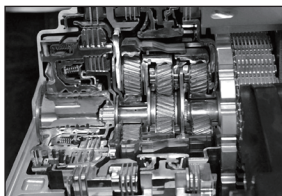
Please read this manual carefully before operation.
You must read and understand the precautions for safety
and avoid any damages and injury.

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► This manual was prepared in January 2017 the product specifications contained in this manual are subject to change without notice.

1-1.Features and characteristics



Possible to work for 4-10 shift transmission



Exchanging level gauge Mode

Possible to work for car type without level gauge



Voice guidance Mode



One-touch oil line change Mode

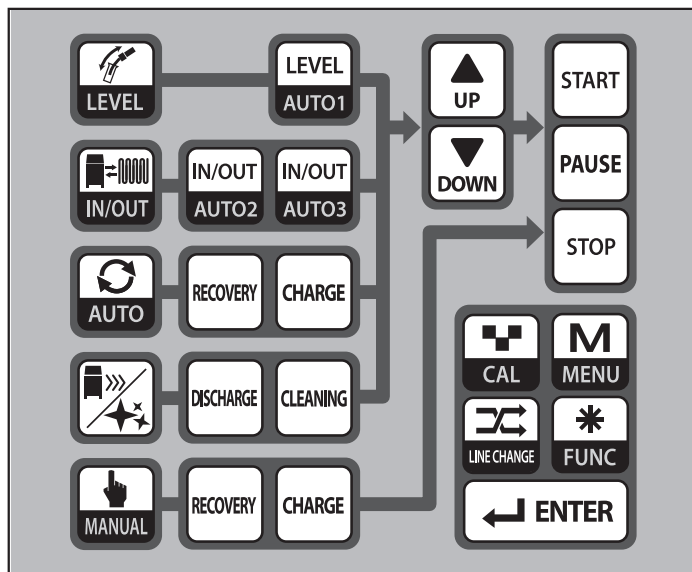


Input car data

Etc.

- Equiped electronic digital scale
- Oil saving Mode
(Some of car type are excluded)
- Installed oil exchange program on cooler line
- Display oil temperature
- Possible transmission flushing by chemical
- Used oil sampling function (Application of selected model)
- Installed 40L used oil tank
- Installed anti-overflowing sensor of used oil

1-2. Description



① Exchanging level gauge Mode



② Exchanging IN/OUT Cooler line



③ Oil saving Mode : 0.1 liters of used oil recovery and inject new oil, so you let healing the least. (Except for some models)



④ Recovery used oil In the vehicle set amount



⑤ inject new oil In the vehicle set amount



⑥ Drain the used oil.



⑦ Possible transmission flushing by chemical



⑧ Recovery : Recovery of waste oil into the device in a vehicle. (It works only when pressing the start button)



⑨ Inject : Inject of new oil into the device in a vehicle. (It works only when pressing the start button)



⑩ Up button



⑪ Down button



⑫ Start button



⑬ Pause button



⑭ Stop button



⑮ Calibration the scale.



⑯ Menu button



⑰ Line change(option) : Change Injection and recovery hose lines.



⑱ FUNC : System settings









⑲ ENTER button

1-3. Specification

Model No.	HO-250A
Control type	Computer control
Measurement	Digital scale control
Motor	0.2kw 1PH 220V
Pump Type	TRO CHOID Relief Auto
New oil tank	20ℓ
Used oil tank	40ℓ
Net weight	Approx. 50kg
Dimension	530(W) x 595(L) x 900(H)mm

2-1. Danger / Warning / Caution

 Danger / Warning / Caution	
	Make sure you follow the instructions, otherwise critical injury or death can occur.
	Make sure you follow the instructions, otherwise critical injury or damage can occur.
	Make sure you follow the instructions; otherwise, injury or damage can occur
	The terms are described to enhance the understanding of the equipment.


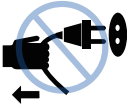














	Danger / Warning / Caution
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Only trained personnel may operate the equipment. Inexperience can cause accidents.



Work only on the horizontal place for safety purpose.

 <p>Make sure to install it indoors only and protect it from rain or snow.</p>	 <p>Do not apply excessive force to unplug power cord. ► It may cause an electric shock or a fire.</p>
 <p>Do not expose this product directly to rain and moisture. ► It may cause injuries or even death.</p>	 <p>Do not work with this product close to heating source. ► It may cause injuries or even death.</p>
 <p>Do not touch power cord with wet hands. ► It may cause injuries or even death.</p>	 <p>Do not use damaged power plug or loosened outlet. ► It may cause injuries or even death.</p>
 <p>Make sure that electric outlet/pins must be maintained clean. ► It may cause an electric shock or a fire.</p>	 <p>Do not insert multiple plugs on the socket. ► It may cause an electric shock or a fire.</p>
 <p>Do not apply any impact on the body frame[housing] or expose it to dust. ► It may cause unexpected malfunction.</p>	 <p>Do not expose this product to direct sun light. ► It may cause unexpected malfunction.</p>
 <p>Do not modify the control panel and structure voluntarily. ► It may cause unexpected malfunction.</p>	 <p>Do not attempt to push any incorrect button during operation. ► It may cause unexpected malfunction.</p>
 <p>Make sure to install it indoors only and protect it from rain or snow.</p>	 <p>Read this manual carefully before use. ► Serious accidents may happen due to negligence of danger & warning information.</p>
 <p>Do not bend the power cord or place any heavy article on it.</p>	 <p>Do not use unprescribed oil. ► It can cause damage to the machine.</p>



Make sure that you read and understand them.

3-1. Preparing to work

- (1) Fill up new oil in the new oil tank.
- (2) Connect power supply and turn on the power switch.
- (3) FWD vehicle shift the gear into N and RWD vehicle shift the gear into P.
- (4) Connect coupler to recovery hose and injection hose.
- (5) Make sure oil flow direction is upward(↑) in the sight glass.
- (6) If oil flow direction is downward(↓), switch line change lever.
Then oil flow direction will be changed to upward.



- ▶ Park vehicle on the flat floor and make sure the vehicle is securely braked.
(*If necessary, prop up wheels to prevent rolling the wheel.)
- ▶ Operator should wear safety glasses and protective equipment.
- ▶ Precise electronic scale equipped in the product, so pay attention to prevent damage from impact or shock.

3-2. How to calibration new oil Scale



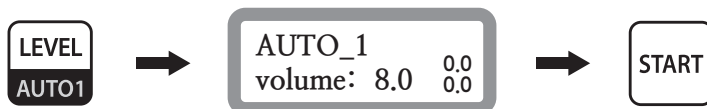
CALIBRATION
UP = 20 liter
DOWN = 0 liter



- 1) Calibration with 20 liter empty oil tank
 - 1-1) Put 20 liter empty oil tank on the electronic scale.
 - 1-2) Connect the oil inlet hose.
 - 1-3) Press the calibration button.
 - 1-4) Press DOWN button and hold (3sec) until COMPLETE message shown on the screen.
 - 1-5) Make sure the process is completed.
- 2) Calibration with 20 liter full oil tank.
 - 2-1) Put 20 liter full oil tank on the electronic scale.
 - 2-2) Connect the oil inlet hose.
 - 2-3) Press the calibration button.
 - 2-4) Press UP button and hold (3sec) until COMPLETE message shown on the screen.
 - 2-5) Make sure the process is completed.

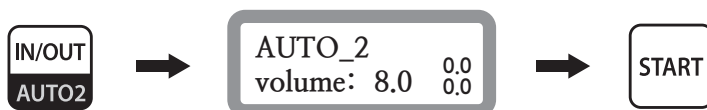
3-3. How to Use

(1) Exchanging level gauge mode



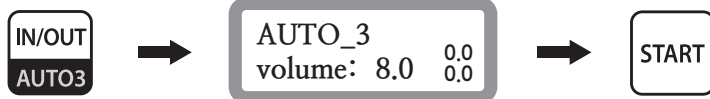
- 1) Insert the hose to the oil check gauge of the vehicle.
- 2) Connect the appropriate accessories in the vehicle.
(Accessories for level gauge)
- 3) Connect a hose on any device orientation.
- 4) Select the level gauge mode(AUTO1).
- 5) Use the ▲ ▼ buttons to set the amount of oil changes. (Initial value 8.0 liters)
- 6) Press the Start button.
- 7) If necessary after checking whether the end-of-job message comes up oil level is potent using a setting recovery, setting injection and align the oil level.
- 8) Finish the work.

(2) Exchanging cooler line mode



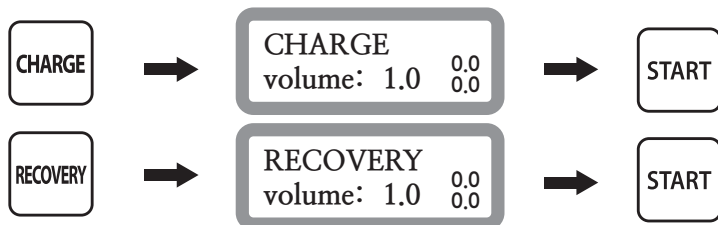
- 1) Remove the cooling line of the vehicle.
- 2) Connect the appropriate accessories in the vehicle.
- 3) Connect a hose on any device orientation.
- 4) Check the oil flow direction. (The normal flow is flowing over, under it.) †
- 5) Switch the direction lever to replace the line if the oil flow direction does not match.
- 6) AUTO2 Select the exchanging cooler line mode.
- 7) Use ▲ ▼ to set the amount of oil changes. (Initial value 8.0 liters)
- 8) Press the Start button.
- 9) If necessary after checking whether the end-of-job message comes up oil level is potent using a setting recovery, setting injection and align the oil level.
- 10) Finish the work.

(3) Oil saving Mode



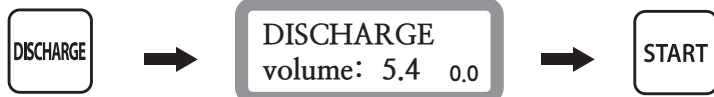
- 1) Remove the cooling line of the vehicle.
- 2) Connect the appropriate accessories in the vehicle.
- 3) Connect a hose on any device orientation.
- 4) Check the oil flow direction. (The normal flow is flowing over, under it.) ⚠
- 5) Switch the direction lever to replace the line if the oil flow direction does not match.
- 6) AUTO3 Select the oil saving mode.
- 7) Use ▲ ▼ to set the amount of oil changes. (Initial value 8.0 liters)
- 8) Press the Start button.
- 9) If necessary after checking whether the end-of-job message comes up oil level is potent using a setting recovery, setting injection and align the oil level.
- 10) Finish the work.

(4) Setting recovery / Setting injection



- 1) Select Setting recovery or Setting injection.
- 2) Use the ▲ ▼ buttons to set.
- 3) Press Start button.

(5) Discharge used oil



- 1) Pull the exchange lever forward.
- 2) Connect the hose accessories at the end of Injection hose (red).
- 3) Press the discharge used oil button.
- 4) Press the Start button.
- 5) Check that the discharge through an Injection hose.

(6) Other information Description

NEW : 0.0 L
USED : 0.0 L
TEMPERATURE : 00°C

- 1) Standby : Display oil temperature, new oil and used oil.

RECOVERY
volume: 0.0

- 2) Manual Recovery : Only works if press the START button

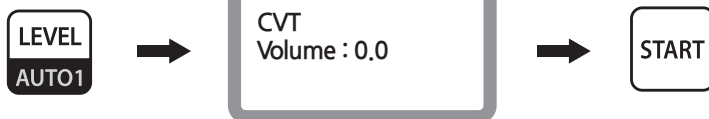
CHARGE
volume: 0.0

- 3) Manual Injection : Only works if press the START button

CLEANING
5 minute

- 4) Cleaning mode : After chemical Injection, setting UP/DOWN buttons and START button to begin

(7) CVT exchange the Mission oil



- 1) Park the vehicle in a flat position or lift.
- 2) Set the selection lever to the "P" position and fill the parking brake.
- 3) Start the engine of the vehicle and check the amount of oil in the oil level gauge check range.
- 4) Stop the engine.
- 5) Insert the gauge hole into the black hose for connection to the cooler. After connecting the hose, insert it into the level gauge hole.



- ▶ Connect coupler mage to one hose coupler to prevent air from entering.
- ▶ Insert it until it touches the oil pan and be careful not to bend the tip of the insertion hose.
- ▶ Insert the gauge hole during replacement.

- 6) Turn on the power switch.
- 7) Press [LEVEL AUTO1] twice. → Check "CVT_ Oil Change" → Press [Start] key.
- 8) After suctioning the waste oil from the transmission, the same amount of new oil as the amount of the inhaled waste oil is injected into the transmission.
- 9) Start the engine and warm up the engine for 3 to 5 minutes.
- 10) Stop the engine and if necessary repeat steps No.8 to No.10 again.

<Caution>

Driving test of the vehicle is prohibited when the equipment is inhaled or oiled.

- 11) After completing the oil change, separate the vehicle and oil changer, operate the shift lever twice for 2 to 3 seconds at each position, and check the oil level with the level gauge. (Please refer to Maintenance Manual).
- ▶ It is used when injecting new amount of oil after inhalation of oil inside the transmission

(8) AUTO 3_Exchange : Flushing exchange 3stages

Step 3 : Change the Flushing: Press the AUTO3 button to enter this function.
Move the arrow with the ENTER button, and change the data with the UP / DOWN buttons

3 STAGE MODE
1sta > 3.0L 5M
2sta 3.0L 5M
3sta 8.0L 5M

5-1) Set the 1st stage oil level.

3 STAGE MODE
1sta 3.0L > 5M
2sta 3.0L 5M
3sta 8.0L 5M

5-2) Set the 1st step waiting time.

3 STAGE MODE
1sta 3.0L 5M
2sta > 3.0L 5M
3sta 8.0L 5M

5-3) Set the 2nd stage oil level.

3 STAGE MODE
1sta 3.0L 5M
2sta 3.0L > 5M
3sta 8.0L 5M

5-4) Set the 2nd step waiting time.

3 STAGE MODE
1sta 3.0L 5M
2sta 3.0L 5M
3sta > 8.0L 5M

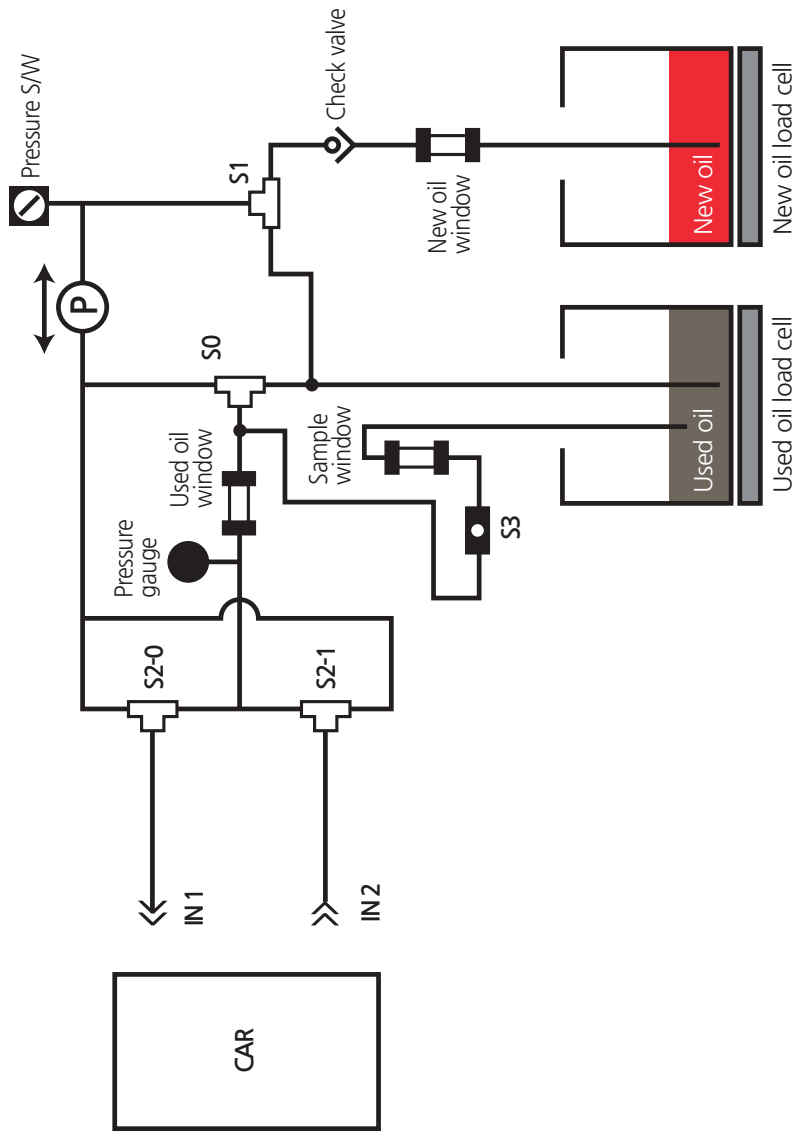
5-5) Set the oil level in 3 steps.

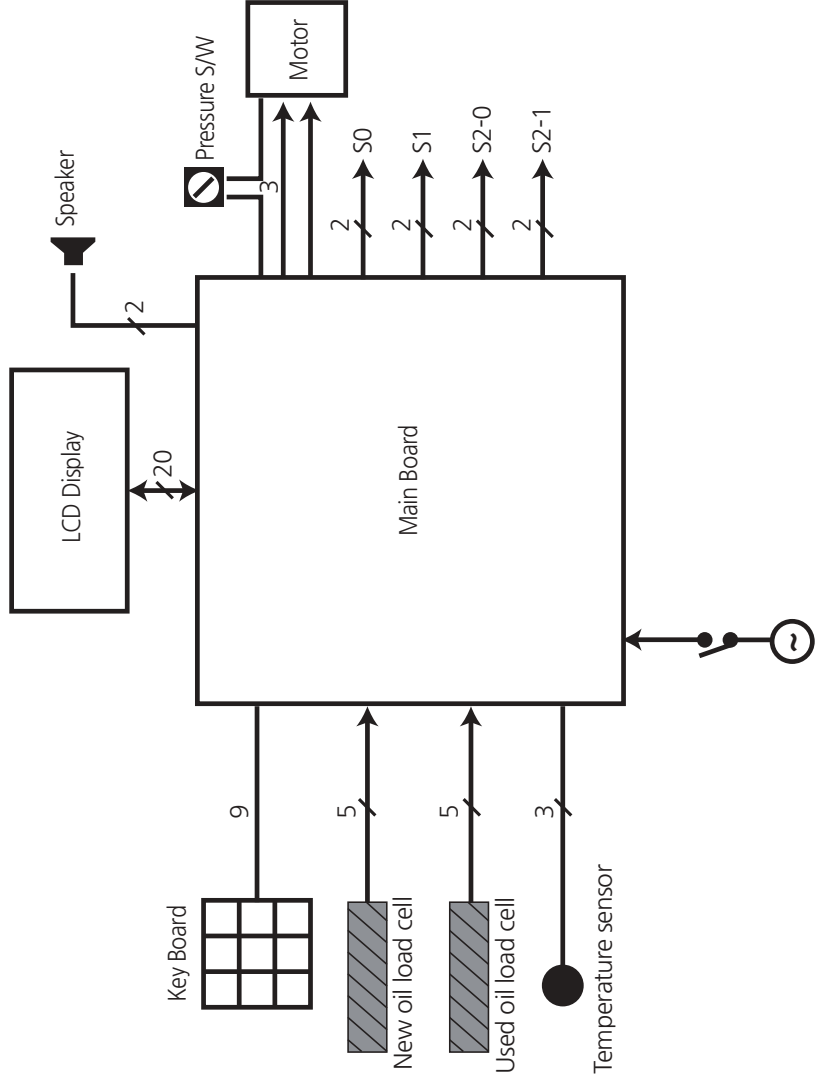
3 STAGE MODE
1sta 3.0L 5M
2sta 3.0L 5M
3sta 8.0L > 5M

5-6) Set the 3 step waiting time

4-1. Troubleshooting




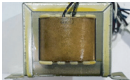





	Symptom	Solution
	0.1 liter for 20 seconds When used oil is not recovered	1. Check the amount of oil of vehicle 2. The vehicle shift lever P-> as N, N-> P After the conversion starts
	0.1 liter for 20 seconds When new oil is not recovered	1. Ensure that the new oil tank is installed correctly 2. Check that the inlet connection is correct of new oil 3. Check connect the inlet hose is new oil container Press or apply pressure to ensure that 4. Make sure that new oil is not lacking
	The used oil overflow	Discard used oil equipment.
	Insufficient new oil	Supplements new oil.





Part list

Feature	Description	Code
	Electric valve (1)	880101
	Electric valve (2)	880102
	Pressure switch	880103
	Motor	880104
	Oil pump	880105
	Rear wheel	880106
	Front caster	880107
	Hose coupler	880108
	Hose hanger	880109

Feature	Description	Code
	Hose holder	880110
	Hose (2.5M)	880111
	Speaker	880112
	Transformer	880113
	Key pad	880114
	Display panel	880115
	LCD display	880116
	Main PCB	880117
	Load cell	880118

Part list

Feature	Description	Code
	Oil tank	880119
	Power S/W	880120
	Power cable socket	880121
	Pressure gauge	880122
	Sight glass	880123



HESHBON CO.,LTD.

673-52, GYEONGSEO-DONG, SEO-GU, INCHEON, 404-170 KOREA
TEL: +82-32-585-3570(Int'l trading) / FAX: +82-32-585-3535
<http://www.heshbon.com> / e-mail: export@heshbon.com