

OPERATION MANUAL

PRODUCT NAME :

OIL LINE FLUSHER & PERFORMANCE +
THROTTLE BODY & INTAKE VALVE CLEANER



MODEL : **IMPACT-400** (2 in 1)

Certified by CE & ISO 9001

DESIGNED & MANUFACTURED BY IMPACT CORP

82-31-761-2279 / Korea

OIL LINE FLUSHER & PERFORMANCE

Purpose of this system : This is to designed to remove the various carbon deposit and sludges from the entire engine oil contact surface and showing to customer for remove waste oil residue from the engine with washing by the normal engine oil as PERFORMANCE

OPERATION INSTRUCTION

BASIC PREPARATION BEFORE OPERATION

- * Connect compresure air, about 5 kg/cm³
- * Pour 1 liter normal engine oil into the washing oil storage tank
- * Prepare proper adapter & connector

1. PARTS EXPLANATION

- * Pressure hose with coupler / OUT line from machine to filter center
- * Return hose with coupler / IN line from oil filter outside line to machine
- * Two operating lever : Oil flusher / Air flusher + Washing oil
- * Air flusher ON / OFF switch
- * Washing oil pressuring ON / OFF switch
- * Pressure regulator / not necessary to control, if want, controllable
Its controller installed inside of machine
- * Washing oil storage tank / Maximum 1.5 liter
- * Filter housing : 25 micron concentric filter inside
- * Suction & discharge lever :

Left side /Suction **Middle** side /Stand-by **Right side** /Waste duscharge

2. HOSE CONNECTION METHOD

Pressure line shall be connected to the center line to engine oil filter adapter, return line connect to oil filter outside line and it's flow :
Engine oil outer line → machine's return (IN) line → Machine's filter → machine's pressure (OUT) line → Engine oil filter's center line to engine

3. FLUSHING CHEMICAL POUR

* One bottle of Impact-2500 / Oil flushing chemical into oil cap & close

* **IMPACT-2500 flushing chemical will perform best flushing capabilities**



One bottle of Impact-2500 will carry out up to 5 liter engine oil capacity, For example , if want to flushing about 9 liter engine oil, need to use two bottle, REQUIRE TO POUR PROPER AMOUNT OF CHEMICAL

4. OIL FLUSHING PROCESS

* Engine run under the machine's Lever position OIL FLUSHER then oil shall circulating from the engine to machine , Oil should flow from the outside of filter and into inside of filter

(Minimum 30 minutes up to 60 minutes)

* Oil circulating pressure : Regular engine oil pump pressure are about 5.0-5.5 kg/cm², but oil circulating pressure will showing a little lower

* **Oil circulating pressure and it's phenomenon**

1) Oil circulation pressure below 1.6 kg/cm² : It may need to change oil pump, already damaged pump or opened pressure relief valve with spring / but possible to run the engine

2) Pressure 1.6 ~ 2.2 kg/cm² : Showing Normal oil circulating pressure and condition, just flushing about 30 minutes

3) Pressure 2.2 ~ 4.5 kg/cm² : Started to accumulate oil sludges & carbon deposit, need flushing with flushing chemical about 30~60 minutes, it may meet to normal circulating pressure.

If not meet normal circulation pressure even flushed about 30-60 minutes, necessary to flush again in next oil change time

4) Pressure over 4.5 kg/cm² : Already accumulated a plenty of oil sludges with burnt carbon deposit on the oil contact surface all over, in this case, definitely need to clean Oil strainer on the crank case side by hand and then flushing about 60 minutes

Caution : In this case, may appear un-expected problem after flushing without cleaning oil strainer by hand , may happen oil strainer clogging matter and oil circulating stop

If showing plenty of oil sludges around oil cap side and inside,

In this case, Must blow off by air gun into Oil filter mounting hole both oil inlet hole and oil outlet hole to remove harden carbon sludges around Oil strainer before waste oil drain

* **Oil circulating pressure drop** : During flushing process, can see the its pressure drop & engine noisy drop significantly.

Normal pressure drop of Petrol car : about 0.5-2.5 kg/cm²

Normal pressure drop of diesel car : about 0.3-1.0 kg/cm²

(Diesel engine will show much higher oil circulating pressure, about 4.5-6 kg/cm², however this pressure will drop a little after flushing because of oil circulating line's diameter is bigger than petrol engine)

5. FILTER CHANGE

Using 25 micron in the filter, it can be filtered up to 5 passenger car but one filter and one car is the best that manufacturer recommend.

PERFORMANCE PROCESS

1. Air flushing : Remove all waste oil from the engine through crank case cock, before flushing adapter not disconnecting from the engine
2. Find proper size of drain cock adapter and tightening to drain cock and connect suction hose to this cock adapter
3. When showing last waste oil drop from the engine, will show to customer, how many volume of waste oil residue still is in the engine.

TO REMOVE ALL WASTE OIL

1. Suction Switch ON
2. Air flusher switch ON
3. Wait about 1-2 minutes , Then waste oil will collecting to suction tank, slowly, approximately 0.4 - 1.0 liter, it must showing to the customer's maximum satisfaction therefore, It must be explained to each customer,
4. Finally washing by the new oil about 1 liter, Stored to right side tank
Set the Lever position to WASHING OIL FILLER and Washing oil filling switch ON, then oil will flow slowly from the machine into the engine and slowly discharge from the crank case cock

*** Recommend to add Impact-3000 for WEAR METAL restore**

MoS₂ Engine coating and treatment is best to restore damaged cylinder liner (wall) to increase compression power & engine power.
(1 bottle for 6 liter of engine oil capacity)



400 ADAPTER SET

Individual Cartridge filter adapter is option now supply 10 different type of filter adapter for Korean car



MAIN NO. 1



MAIN NO. 1-1



L-Type Coupling Gender



CONNECTING COUPLER



SMALL FILTER



**OIL COCK ADAPTERS
FOR SUCTION**



NO.7



NO.8



NO.9



NO. 0

SPECIFICATION (CE MARK)

DESCRIPTION	OIL FLUSHER with PERFORMANCE (2 in 1)
MODEL NUMBER	IMPACT-400
POWER	AIR 5 BAR
FILTER	CONCENTRIC FILTER / 25 MICRON
WASHING OIL TANK	NORMALLY 1 LITER (MAX. 1.2 LITER)
METHOD OF FLUSH	ENGINE RUN with WASTE OIL CIRCULATION
FLUSHING TIME	MINIMUM. 30 MINUTES IN CASE DIRTY, REQUIRE TO FLUSHING ABOUT 60 MINUTES
PRESSURE ADJUST	CONTROLLED INSIDE IF YOU WANT TO ADJUST, POSSIBLE
LENGTH OF HOSE	PRESSURE 3 METERS, RETURN 3 METERS
METHOD OF SOLUTION FILL	POUR 1 BOTTLE INTO OIL CAP FOR 6 LITER ENGINE OIL
SUCTION TANK	1.5 LITER CLEAR PLASTIC
COVER MATERIAL	STAINLESS STEEL
ADAPTER	STANDARD ADAPTERS, NOT INCLUDED CARTRIDGE FILTER TYPE
WEIGHT	NET WEIGHT 30 kg, GROSS WEIGHT 37 kg
DIMENSION	NET 38 X 51 X 95cm, GROSS 41 × 57 × 104cm
SOLUTION	IMPACT-2500,, SPECIAL FORMULATED FLUSHING SOLUTION

THROTTLE BODY & INTAKE VALVE CLEANER

Purpose of this system : This is to designed to clean any throttle body & intake valve, under the spray device and cleaning chemical solution to remove various carbon deposit and sludges from the air intake system to restore engine efficiency

OPERATION INSTRUCTION

BASIC PREPARATION BEFORE OPERATION

- * Pour one bottle of chemical into the storage tank
- * Air connect (when connect air coupler, air regulator must be ZERO position, otherwise may damage its gauge when suddenly high pressure)
- * Spray nozzle and holder set to throttle body into the manifold direction
- * Start engine and wait until reach to engine normal temp.
- * For the spray adjust : Slowly move lever to OPEN position then need to adjust for the best spray pattern

1. RECOMMEND SPRAY PRESSURE & ENGINE RPM

- * **Gasoline : from 1.0 - 2.0 BAR / 1,200 rpm / over 20 min.**
- * **Diesel : from 3.0 - 4.0 BAR / 1,500 rpm / over 30 min.**

For the best restoring results : Manufacturer recommend lower spray pressure and longer time are better

2. CAUTION

- * For the diesel & CRDI , do not adjust rpm during cleaning process
May happen knocking or increase rpm up to 5,000
- * Nissan and few other car, may need to initial setting right after cleaning process.
because it may not engine start.
- * After cleaning process, when showing bad idling condition, may need to clean ISC valve or required ECU settlement (take out (-) electric) from the battery
- * Safety valve installed inside , set 4.0 kg/cm² for safe
Operational pressure cannot reach over 4.0 kg/cm² because of valve
- * Impact chemical solution is not toxic and explosive and dangerous however,
when touch the skin & eye, need to wash by water

Remark : When showing spray pattern is not good, may need to clean transparent hose and nozzle by Air and Alcohol liquid.

Compressed air contains small amount of humidity, this humidity may reaction to solution's special detergent.

in this case, Disconnect hose and nozzle and remove all sludges by air gun or clean by normal alcohol

Pour 50 ml alcohol into the storage tank and blow out to hose

BEST & BEST ENGINE RESTORING OPERATION

During the oil line flushing operation (Impact-400 with Impact-2500).

operating together with Throttle body and intake valve clean by (Impact-730), this work will show fantastic results as below

Furthermore, restore damaged cylinder liner by Molybdenum Di-sulfite coating (Impact-3000) material.

- 1) **Fuel saving : max. 15 %**
- 2) **Engine noisy down : max. 60 %**
- 3) **Increase acceleration : max. 50 %**
- 4) **Increase engine power : Max. 30 %**
- 5) **Increase engine part's life time about double**

Required Chemical solution



Model : 2500

Oil flushing

3000

MoS2 Coating Multi-purpose

2000

730-G

**Intake &
Throttle**

730-D

**Intake &
Throttle**

SPECIFICATION (CE MARK)

DESCRIPTION	THROTTLE BODY & INTAKE VALVE CLEANER
MODEL NUMBER	IMPACT-730 side
POWER	AIR 5 BAR
NOZZLE TYPE	LONG , SHORT AND TRIANGLE TYPE SPRAY NOZZLE
SOLUTION TANK	600 ml inside
METHOD OF CLEAN	ENGINE RUN with SPRAY INTO THROTTLE GATE
CLEANING TIME	Minimum. 20 MINUTES, normally 30-40 minutes Longest time is better cleaning capabilities
PRESSURE ADJUST	ADJUSTABLE
LENGTH OF HOSE	CHEMICAL AND AIR : 2.5 METERS
METHOD OF SOLUTION FILL	POUR 1 BOTTLE INTO SOLUTION TANK
SOLUTION	300 ml BOTTLE / STEEL CAN
SPRAY PRESSURE	GASOLINE / 1.0-2.0 BAR CRDI / 3.0-4.0 BAR
SPRAY POSITION	GASOLINE : THROTTLE GATE or BLOW BY HOSE TO MANIFOLD DIESEL : SERGE TANK TO MANIFOLD
SOLUTION	IMPACT-730 G / GASOLINE, IMPACT-730 D / DIESEL