

# EBS PRODUCTS

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## OPERATIONS MANUAL



### EPG-1 Power Steering - Gear Oil Fluid Service Equipment

#1000-0060

1-1-16

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## I. SAFETY INFORMATION

### 1.01 IMPORTANT SAFETY NOTICE

For your safety, read this manual thoroughly before operating your EBS Power Steering/ Gear Fluid Service equipment. Always refer to and follow the safety messages and applicable service procedures provided by the manufacturer of the vehicle being serviced. Only properly trained professional automotive technicians should perform the service. *Improper use and operation of this product can result in injury.*

#### • Safety Symbols



Risk of Fire



Mandatory Eye Protection



Risk of Entanglement



Mandatory Protective Gloves



Dangerous Fumes



Mandatory Protective Clothing

### 1.02 IMPORTANT SAFETY INSTRUCTIONS



WARNING



Insure both ambient and electro mechanical ventilation of work area.

**When using chemicals always refer to the MSDS sheets and local laws for proper emergency medical treatment, cleanup, handling, and storage requirements.**

**Wear safety glasses (user and bystanders), chemical resistant gloves, and protective clothing when servicing a vehicle with the EBS Power Steering/Gear fluid service equipment.**

**Keep yourself, clothing, adapters and service hoses clear of moving parts.**

**Avoid exposure to flames, sparks, hot engine parts, and other ignition sources**

**Care should be taken to arrange the power cord and service hoses so that they will not be tripped over or pulled.**

## **EPG-1 #1000-0060 Power Steering & Gear Oil Service Specifications**

**1-1-16 PATENT PENDING**

- ⇒ A self-contained power steering and gear oil service equipment
- ⇒ Both 110vac fused power converted to 12vdc operation or 12vdc battery power available
- ⇒ 22ft. Heavy Duty - 110vac power cable with holder attached to the cabinet
- ⇒ 12ft. Heavy Duty 12vdc battery cable attached to cabinet
- ⇒ Easy to use and understand electric switch control
- ⇒ 1 GPM power steering and 3 GPM gear oil 12 vdc fill pumps
- ⇒ 2 gallon new power steering fluid tank, front visible and top filled
- ⇒ 2 gallon new gear oil tank, front visible and top filled
- ⇒ 3.7 GPM rated vacuum pump
- ⇒ 6 foot heavy duty braided power steering, gear oil and vacuum hoses
- ⇒ Separate hand controlled dispensing guns for power steering fluid and gear oil – Wand valve for vacuuming.
- ⇒ 2 ½ gallon waste tank in rear receptacle is easily removed for emptying



- ⇒ Equipment cabinet is made from heavy-duty industrial grade polyethylene to provide for the safe and secure containment of all parts and tanks
- ⇒ Cabinet contains a built-in sturdy handle to assist in movement of the equipment
- ⇒ Locking front swivel wheels and large 8” rear wheels

Provide ease of movement

**Note: EP-1 #1000-0065 – Power Steering only or EG-1 #1000-0085-Gear Oil only is available**

**Machine Dimensions:**

|                 |             |
|-----------------|-------------|
| Height          | 48 ½ inches |
| Depth           | 27 inches   |
| Width           | 19 inches   |
| Machine Weight  | 65 lbs.     |
| Shipping Weight | 105 lbs.    |



### III. OPERATING PROCEDURES

**Call 877-955-0515 for any operation, service or maintenance questions**

#### 3.01 CONTROL PANEL OVERVIEW



Figure 1

## KEYS NAME/FUNCTION DETAILS

|                   |   |
|-------------------|---|
| <b>VAC</b>        | Turns vacuum on for Power Steering or Gear Oil vacuuming. |
| <b>P – S FILL</b> | Pumps New P/S Fluid from the New P/S Fluid Tank           |
| <b>DIFF FILL</b>  | Pumps New Gear Oil from the New Gear Oil Tank             |

### 3.02 IDENTIFYING THE SYSTEM FLUID REQUIREMENTS

Identify the power steering or gear system type and the OEM fluid specification of the vehicle to be serviced before performing any set up or servicing procedure on vehicle.

**Follow the vehicle manufacturer’s recommendation for fluid type.**

#### 3. Vehicle Preparation for Power Steering and Gear Oil Fluid Service

1. Insure vehicle is safely parked and **engine is OFF**. **For Gear Oil service vehicle should be safely parked on a lift.**
2. Repair any leaks or malfunction prior to either power steering or gear oil fluid service.
3. Refer to manufacturer's maintenance manual for compliance with manufacturer’s precautions or recommendations prior to exchanging power steering fluid.

4. Wear appropriate protective clothing and goggles.

### 3.04 **Equipment Preparation**

1. Place equipment in a safe area at the front of the vehicle perpendicular to the vehicle's direction and lock equipment wheels. **For Gear Oil service the equipment should be under the vehicle near the gear system being serviced.**
2. Turn all switches to the "OFF" position.
3. Plug machine into a grounded 110 VAC electrical outlet. Extension cords must be rated at 15 amps and grounded, **OR** attach battery cables to vehicle battery. **Select power source – see picture page 4**
4. Turn equipment on. See Figure 2. Verify that the light on the main "Power" switch is illuminated and no equipment pumps turn on.



**Figure 2**

**Figure 3**

**Figure 4**

### 3.05 **Empty WASTE TANK** – (if no waste fluid is present proceed to 3.06, 'FILL NEW FLUID Tank ' below).

1. Manually remove waste hose from waste tank at rear of equipment. See Figure 3
2. Manually remove waste tank and empty contents in the correct waste receptacle, or use waste receptacle vacuum.

### 3.06 **Fill NEW FLUID TANK** – see Figure 4 - (if NEW POWER STEERING or the DIFF FLUID Tank contains the proper amount and type of fluid for servicing the vehicle proceed to "VEHICLE SERVICING" below)

1. Remove the P-S OR Diff NEW tank cap and carefully fill the NEW Fluid Tank with the appropriate amount of fluid required for servicing. Verify amount on the level indicator on the front of the New Fluid Tank.
2. Replace the cap.

## 4.01 **Vehicle Power Steering Fluid Servicing**

1. Remove Power Steering fluid reservoir cap and check for leaks or damage.

2. Turn VAC switch ON and vacuum old power steering fluid in reservoir – control Vacuum using the proportion valve on the vacuum wand base, Figure 5 shows the valve full open. Turn VAC pump OFF when complete.



**Figure 5**



**Figure 6**



**Figure 7**

3. Turn P-S FILL switch ON and fill power steering reservoir with the P-S Fill Line Control Gun – see Figure 7. Turn P-S Fill pump OFF when complete.
4. Turn vehicle engine on.
5. Turn FILL P-S and VAC switch ON.
6. Using VAC wand and P-S FILL gun, vacuum P-S fluid coming into the P-S reservoir from the vehicle's power steering system while keeping the reservoir full of new P-S fluid from the equipment's NEW P-S tank. You can stop the transfer at any time by closing the VAC wand valve – See Figure 6 for closed Vacuum wand valve - and releasing the NEW P-S fluid gun trigger.
7. If desired, while performing step 6. above, another person can sit in the driver's seat and turn the steering wheel lock to lock to improve old fluid evacuation.
8. Stop transfer when the desired amount of P-S fluid has been transferred.
9. Turn all switches OFF.
10. Using either VAC or P-S Fill adjust the fluid level in the P-S reservoir to the correct level.
11. Replace the reservoir cap. Service is complete

#### **4.02 Vehicle Gear Oil Fluid Servicing**

1. Inspect Gear Oil case for leaks or damage – repair as necessary.
2. Remove Gear Oil case reservoir cap.
3. Turn VAC switch ON and vacuum old gear oil fluid in case reservoir – even if a drain plug is available, vacuum first to reduce spillage.
4. Replace drain plug if removed.
5. Turn Diff-Fill switch ON and using the Diff Fill Gun fill the Gear Oil case reservoir to the proper level.
6. Turn Diff – Fill switch OFF.
7. Replace all caps. Service is complete.

## IV PARTS LIST

| PART #    | DESCRIPTION                           |
|-----------|---------------------------------------|
| 1220-0026 | CASTER SWIVEL, SILVER SIDE BRAKE      |
| 1220-0022 | REAR WHEEL AXLE                       |
| 3000-0420 | WASTE TANK 2.5 GALLONS                |
| 3000-0040 | POWER STEERING FILL PUMP 50 PSI       |
| 3000-0020 | GEAR OIL FILL PUMP                    |
| 3000-0050 | GEAR OIL VACUUM PUMP                  |
| 3000-0058 | FILTER                                |
| 3000-0100 | HIGH FLOW GUN 1/4" FNPT               |
| 3000-0015 | NEW 1 GALLON TANKS                    |
| 1520-0000 | ELECTRIC BOX                          |
| 3000-0320 | POWER SUPPLY 150 W                    |
| 1520-0020 | MAIN POWER SWITCH                     |
| 3000-0060 | MINIATURE VALVE 3/8" FNPT X 3/8" FNPT |
| 1520-0010 | POWER CORD CONNECTOR                  |
| 1220-1023 | CAPS FOR 64OZ BOTTLE                  |
| 1520-0040 | POWER CORD                            |
| 3000-0410 | FACE PLATE SWITCHES                   |
| 3000-0400 | TOUCH PAD                             |

### LIMITED TWO (2) YEAR WARRANTY

EBS warrants only to the original Purchaser that under normal use, care and service, the Power Steering – Gear Oil Equipment shall be free from defects in material and workmanship for two year from the date of original purchase. External hoses, remote control modules, adapters and all other attachments, supplies and consumables are warranted for 90 calendar days from the date of original invoice. Filter elements are not warranted.

PURCHASER'S TECHNICIAN MUST HAVE TELEPHONE COMMUNICATIONS WITH EBS TECHNICAL SUPPORT TO DIAGNOSE THE PROBLEM AND DETERMINE IF THE PROBLEM IS A WARRANTY ISSUE BEFORE ANY REPAIRS OR REPLACEMENT CAN BE MADE.

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-**the use of the equipment with non-approved fluids is misuse**; (B) alteration, modification or adjustment of the equipment, improper or negligent use, application, operation, care, cleaning, storage or handling; attachments, supplies or consumables not manufactured or supplied by Seller.