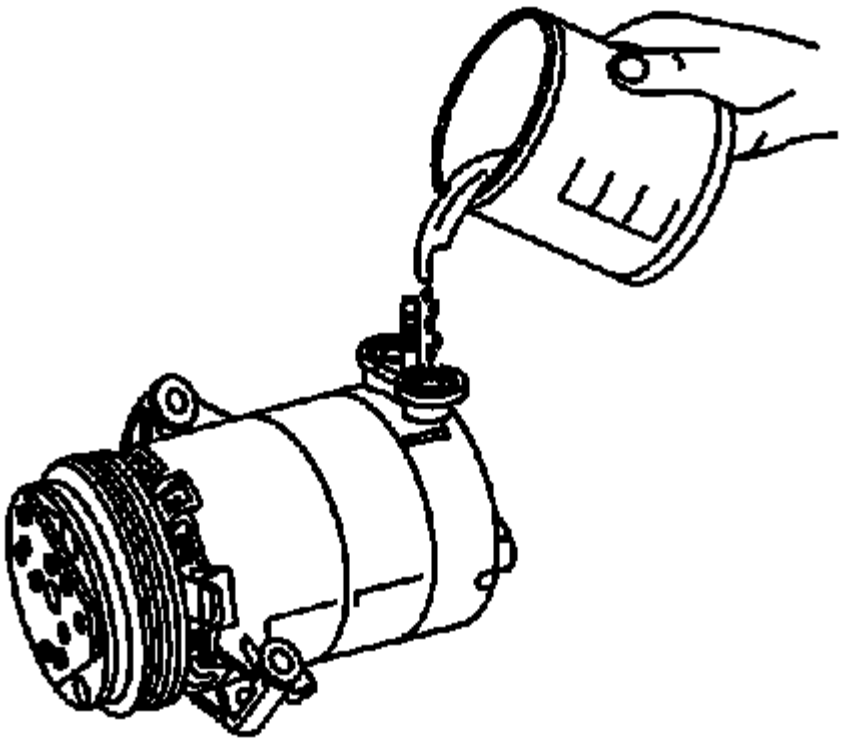

Fig. 2: Replacing Measured Compressor Oil
Courtesy of GENERAL MOTORS COMPANY

2. Add back the same quantity of polyalkylene glycol (PAG) oil as drained from the removed air conditioning compressor. Refer to the amount of refrigerant oil recorded during the air conditioning compressor removal.

AIR CONDITIONING COMPRESSOR REPLACEMENT (LUJ, LUV)

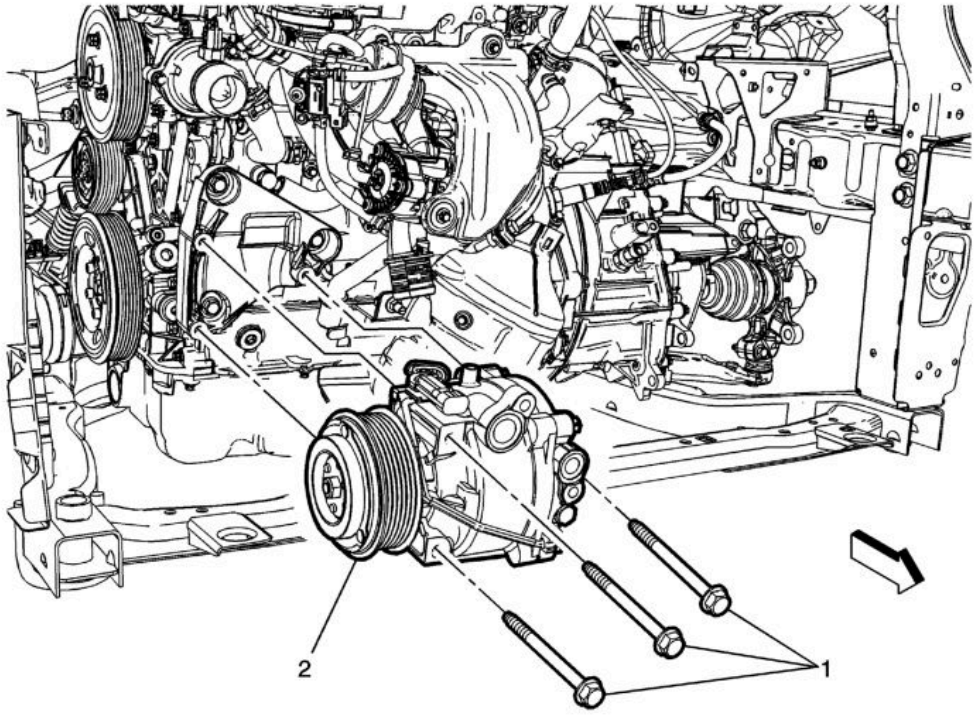

Fig. 3: Air Conditioning Compressor (LUJ, LUV)
Courtesy of GENERAL MOTORS COMPANY

Air Conditioning Compressor Replacement (LUJ, LUV)

Callout	Component Name
Preliminary Procedure 1. Recover the refrigerant. Refer to **Refrigerant Recovery and Recharging (R-134a)**. 2. Raise and support the vehicle. Refer to **Lifting and Jacking the Vehicle** . 3. Remove the front bumper fascia opening lower cover. Refer to **Front Bumper Fascia Opening Lower Cover Replacement (Trax)** . 4. Remove the engine drive belt from the A/C compressor only, unless the belt is damaged. . Refer to **Drive Belt Replacement** . 5. Remove the air conditioning compressor hose from the air conditioning compressor assembly and position the hose out of the way. Refer to **Air Conditioning Compressor Hose Replacement (LUJ, LUV)**. 6. Remove the air conditioning condenser hose from the compressor assembly and position the hose out of the way. Refer to **Air Conditioning Condenser Hose Replacement (LUJ, LUV)**. 7. Disconnect the electrical connector.	
1	Air Conditioning Compressor Bolts (Qty :3) **CAUTION:** **Refer to Fastener Caution .**

	Tighten 22 N.m (16 lb ft)
2	Air Conditioning Compressor **Procedure** When replacing the A/C compressor, balance the compressor oil. Refer to **Air Conditioning Compressor Oil Balancing**

AIR CONDITIONING COMPRESSOR REPLACEMENT (2H0)

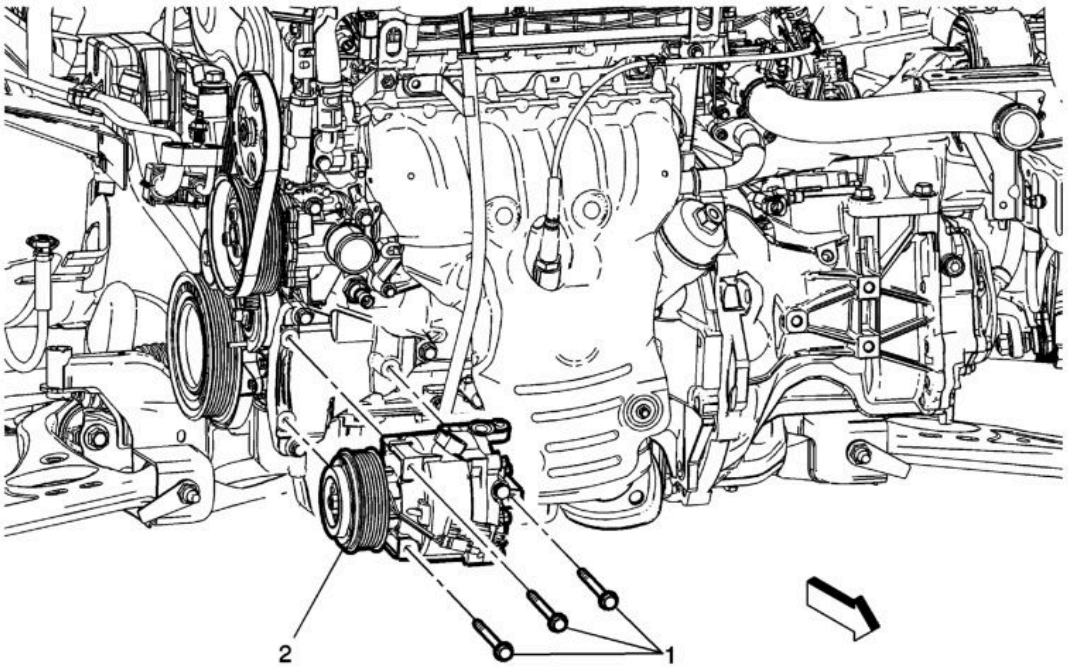

Fig. 4: Air Conditioning Compressor (2H0)
Courtesy of GENERAL MOTORS COMPANY

Air Conditioning Compressor Replacement (2H0)

Callout	Component Name

Preliminary Procedure

1. Recover the refrigerant. Refer to **Refrigerant Recovery and Recharging (R-134a)**.
2. Raise and support the vehicle. Refer to **Lifting and Jacking the Vehicle** .
3. Remove the front bumper fascia opening lower cover.
4. Remove the engine drive belt. Refer to **Drive Belt Replacement** .
5. Remove the air conditioning compressor hose from the air conditioning compressor assembly and position the hose out of the way. Refer to **Air Conditioning Compressor Hose Replacement**

	(2H0). 6. Remove the air conditioning condenser hose from the compressor assembly and position the hose out of the way. Refer to **Air Conditioning Condenser Hose Replacement (2H0)**. 7. Disconnect the electrical connector.
1	Air Conditioning Compressor Bolts (Qty :3) **CAUTION:** **Refer to Fastener Caution .** **Tighten** 22 N.m (16 lb ft)
2	Air Conditioning Compressor **Procedure** When replacing the A/C compressor, balance the compressor oil. Refer to **Air Conditioning Compressor Oil Balancing**

COMPRESSOR LEAK TESTING (R-134A)

Special Tools

- **GE-39400-A** Halogen Leak Detector
- **GE-41447** R-134A A/C Tracer Dye-Box of 24
- **GE-42220** Universal 12V Leak Detection Lamp
- **GE-43872** Fluorescent Dye Cleaner
- **GE-46297** A/C Dye Injector Kit
- **GE-46297-12** Replacement Dye Cartridges

For equivalent regional tools. Refer to **Special Tools** .

Refrigerant Leak Testing

NOTE: General Motors vehicles are now manufactured with fluorescent dye installed directly into the air conditioning (A/C) system.

The fluorescent dye mixes and flows with the polyalkylene glycol (PAG) oil throughout the refrigerant system.

Verifying some passive leaks may require using the **GE-39400-A** Halogen Leak Detector , even though the A/C system contains fluorescent dye.

The only time that adding additional fluorescent dye is required is after flushing the A/C system.

Fluorescent Leak Detector

Fluorescent dye will assist in locating any leaks in the A/C system.

NOTE: PAG oil is water soluble.

- Condensation on the evaporator core or the refrigerant lines may wash the PAG oil and fluorescent dye away from the actual leak. Condensation may also carry dye through the HVAC module drain.
- Leaks in the A/C system will be indicated in a light green or yellow color when using the leak detection lamp.

  Use the leak detection lamp in the following areas:

  - All fittings or connections that use seal washers or O-rings
  - All of the A/C components
  - The A/C compressor shaft seal
  - The A/C hoses and pressure switches
  - The HVAC module drain tube, if the evaporator core is suspected of leaking
  - The service port sealing caps

    The sealing cap is the primary seal for the service ports.

- Follow the instructions supplied with the **GE-42220** Universal 12V Leak Detection Lamp.
- To prevent false diagnosis in the future, thoroughly clean the residual dye from any area where leaks were found. Use a rag and the approved **GE-43872** Fluorescent Dye Cleaner.

Fluorescent Dye Injection

NOTE: Use only fluorescent dye approved by General Motors.

- **GE-41447 R-134A A/C Tracer Dye-Box of 24 can be poured directly into a removed A/C component.**
- **GE-46297-12 Replacement Dye Cartridges is injected into the low side port using GE-46297 A/C Dye Injector Kit.**

- Not all of the fluorescent dyes are compatible with PAG oil. Some types of dye decrease the oil viscosity or may chemically react with the oil.
- R-134A leak detection dye requires time to work. Depending upon the leak rate, a leak may not become visible for between 15 minutes and 7 days.

NOTE: Do NOT overcharge the A/C system with dye. Use only one 7.39 ml (0.25 oz) charge.

- To prevent false diagnosis, thoroughly clean any residual dye from the service port with a rag and the approved fluorescent dye cleaner **GE-43872** Fluorescent Dye Cleaner.

Halogen Leak Detector

WARNING: Do not operate the detector in a combustible atmosphere since its sensor operates at high temperatures or personal injury and/or damage to the equipment may result.

Ensure that the vehicle has at least 0.45 kg (1 lb) of refrigerant in the A/C refrigeration system in order to perform a leak test. Refer to **Refrigerant Recovery and Recharging (R-134a)** for recharging the A/C system.

NOTE: Halogen leak detectors are sensitive to the following items:

- **Windshield washing solutions**
- **Many solvents and cleaners**
- **Some adhesives used in the vehicle**

Clean and dry all surfaces in order to prevent a false warning. Liquids will damage the detector.

NOTE: Follow a continuous path in order to ensure that you will not miss any possible leaks. Test all areas of the system for leaks.

Follow the instructions supplied with the **GE-39400-A** Halogen Leak Detector.

AIR CONDITIONING CLUTCH ASSEMBLY REPLACEMENT (LUJ, LUV)