

Fig. 4: View Of Starter

Courtesy of GENERAL MOTORS COMPANY

1. Remove the starter motor bolts.
2. Remove the starter motor assembly.

CRANKSHAFT BALANCER REMOVAL

Special Tools

J 44643 Flywheel Hold Tool

For equivalent regional tools, refer to **Special Tools** .

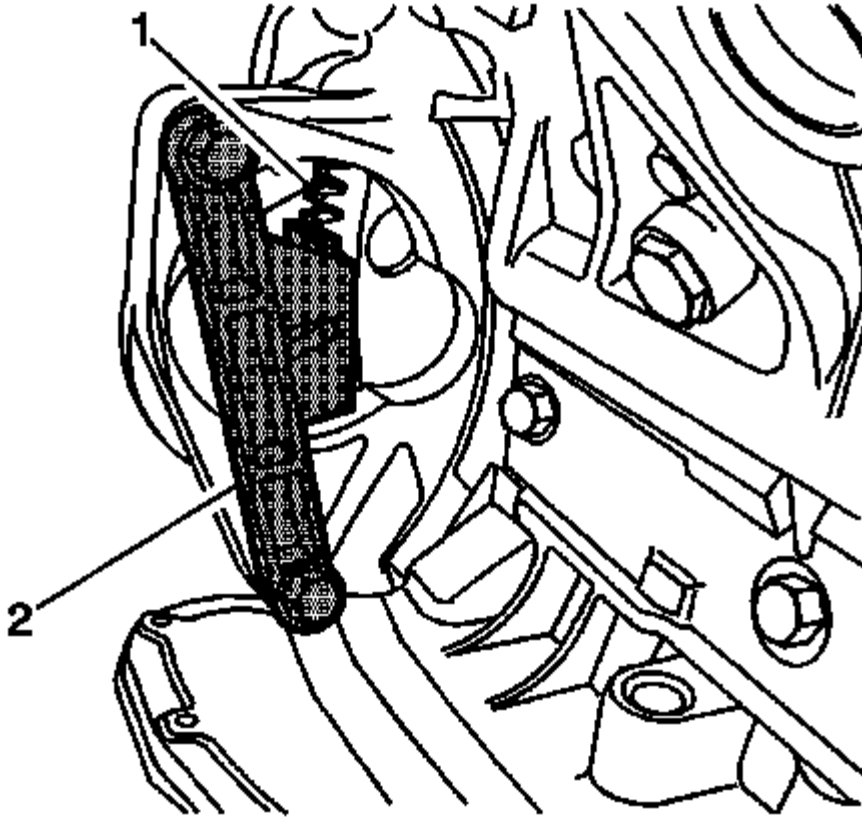


Fig. 5: Locking Flywheel Using J 44643
Courtesy of GENERAL MOTORS COMPANY

1. Install **J 44643** tool (1, 2) to lock the flywheel.

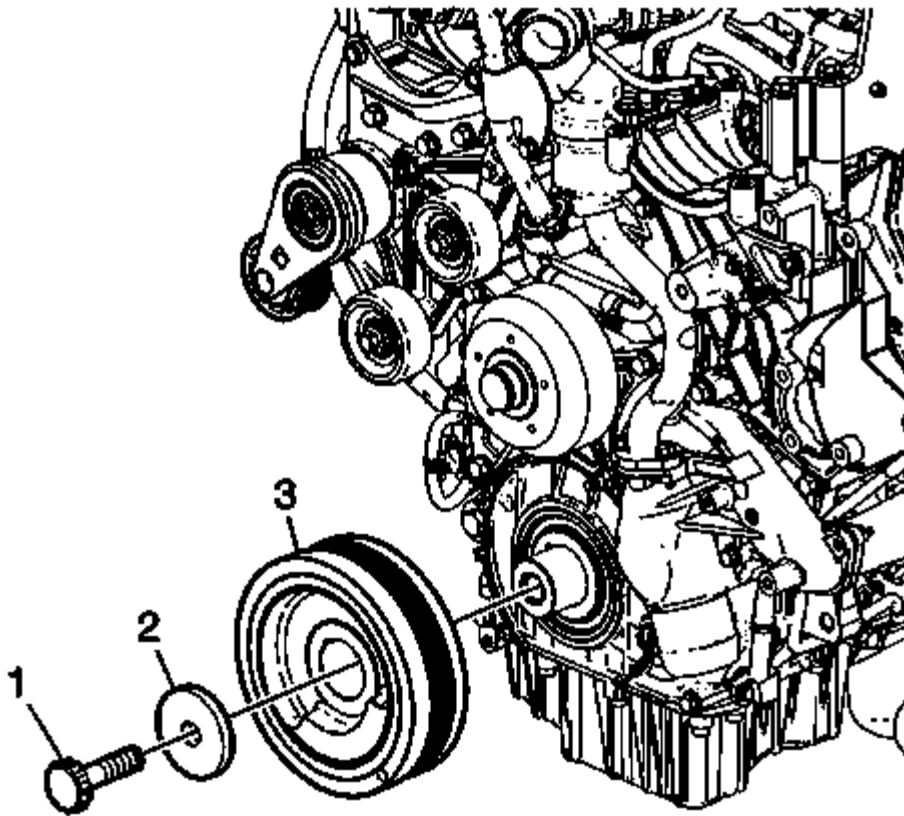


Fig. 6: Identifying Crankshaft Balancer, Washer And Bolt
Courtesy of GENERAL MOTORS COMPANY

2. Remove and discard the crankshaft balancer bolt (1).
3. Remove the crankshaft balancer washer (2) and crankshaft balancer (3).

ENGINE FLYWHEEL REMOVAL (AUTOMATIC TRANSMISSION)

Special Tools

J 44643 Flywheel Hold Tool

For equivalent regional tools, refer to **Special Tools** .

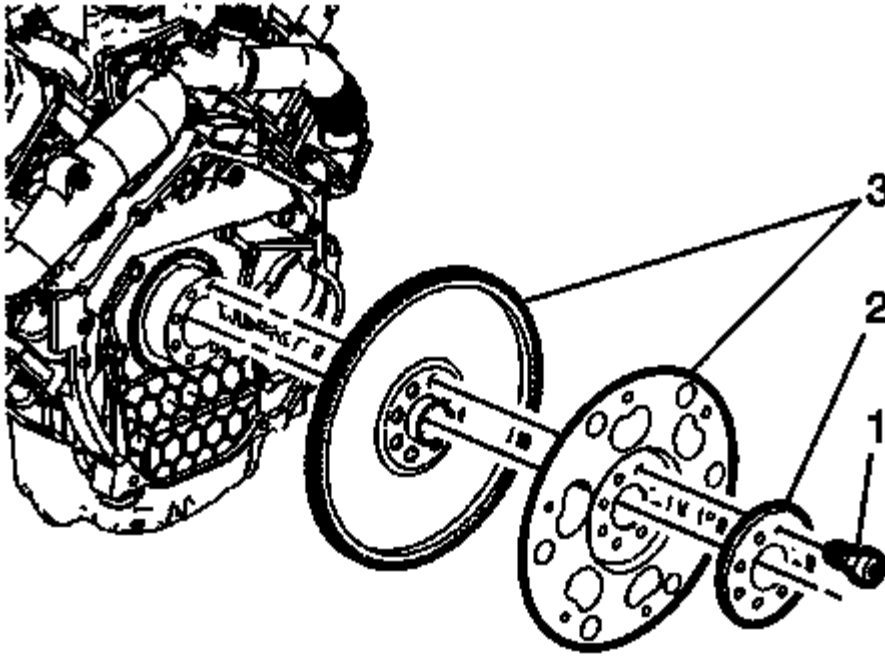


Fig. 7: View Of Flywheel & Washer (Automatic)
Courtesy of GENERAL MOTORS COMPANY

1. Remove the flywheel mounting bolts and discard.
2. Remove the flywheel washer.
3. Remove the **J 44643** tool.
4. Remove the flywheel assembly.

CRANKSHAFT REAR OIL SEAL REMOVAL

Tools Required

J 44641 Crankshaft Rear Oil Seal Remover

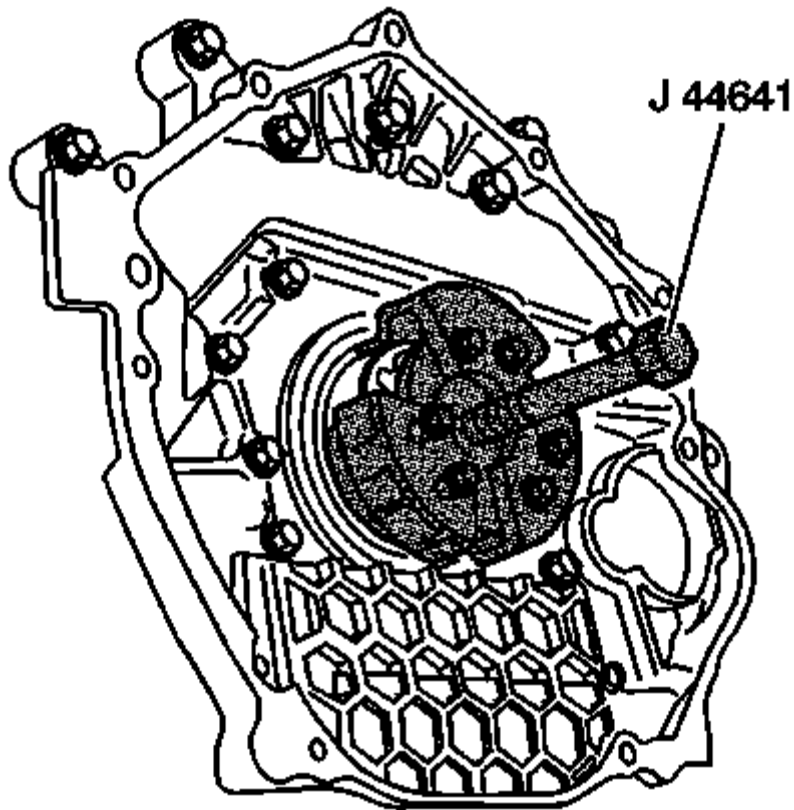


Fig. 8: Removing Crankshaft Rear Oil Seal Using J 44641
Courtesy of GENERAL MOTORS COMPANY

1. Install the button of **J 44641** crankshaft rear oil seal remover into the crankshaft.
2. Press the jaws of **J 44641** crankshaft rear oil seal remover into the felt portion of the seal far enough to engage the inner lip of the seal.
3. While holding the jaws of **J 44641** crankshaft rear oil seal remover tightly to the seal's inner sleeve, tighten the jaw bolts.
4. Remove the crankshaft rear oil seal using the **J 44641** crankshaft rear oil seal remover.

EXHAUST TURBOCHARGER OUTLET PIPE ADAPTER REMOVAL

Special Tools

CH 49736 Hydrocarbon Injector Quick Connect Release Tool

For equivalent regional tools, refer to **Special Tools** .

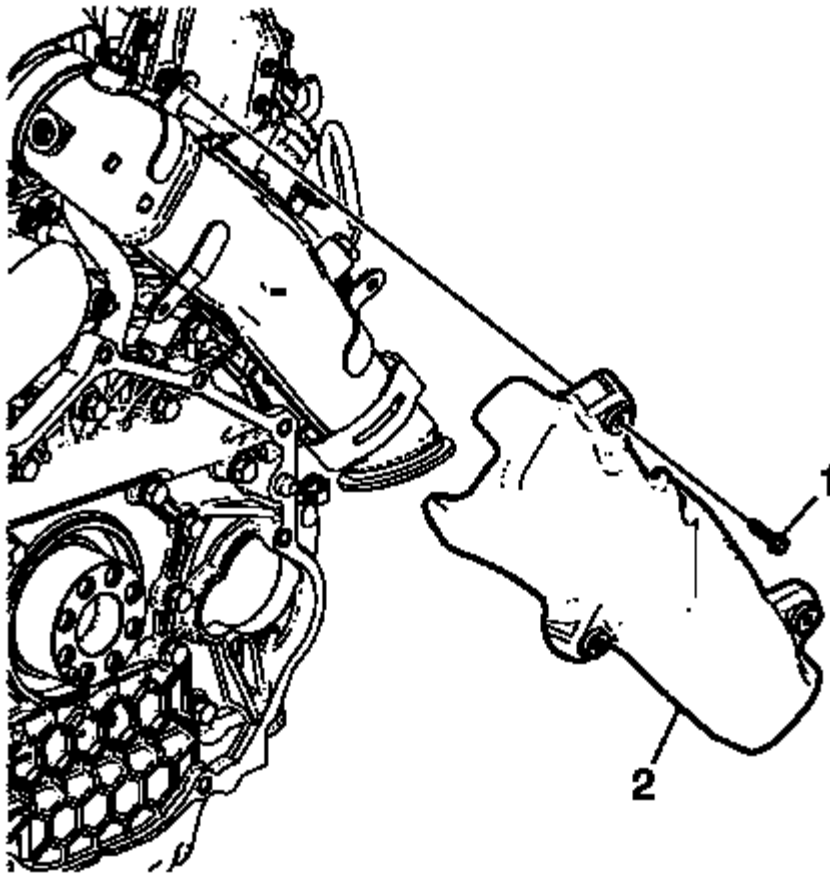


Fig. 9: View Of Exhaust Adapter Heat Shield And Bolts
Courtesy of GENERAL MOTORS COMPANY

1. Remove the exhaust adapter heat shield bolts (1).
2. Remove the exhaust adapter heat shield (2).