

# CRAFTSMAN®

## PROJECT PLANS



## Valve Cover Gasket Replacement

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# MATERIALS

ITEM	QUANTITY
Breather Cover Screws	5
Chemical Gasket Maker	1
Engine Air Distribution Piece	1
Engine Crankcase Breather Hose Connector	1
Breather Hose	2
Valve Cover Gasket (left and right side)	2
Engine Crankcase Breather Hose Connector	1
Engine Oil Separator Hose	1
Degreaser	1

# TOOLS USED



CRAFTSMAN®  
V20\* Compact  
Task Light  
([CMCL005B](#))



CRAFTSMAN®  
V-Series™  
Screwdriver Set  
(8 pc.)  
([CMHT65618V](#))



CRAFTSMAN®  
V-Series™ TORX®  
Screwdriver Set  
(5 pc.)  
([CMHT65630V](#))



CRAFTSMAN®  
V-Series™ 3/8 in.  
Drive Metric  
Deep 6-Point  
Socket Set  
(12 pc.)  
([CMMT17560V](#))



CRAFTSMAN®  
V-Series™ 1/4 in.,  
3/8 in., and 1/2 in.  
Drive Comfort Grip  
Long Flex  
Head Ratchet  
(3 pc.)  
([CMMT86506V](#))



CRAFTSMAN®  
28 oz. Dead  
Blow Hammer  
([CMHT54166](#))

\*20V MAX battery, maximum initial battery voltage (measured without a workload) is 20 volts. Nominal voltage is 18.

CONTINUED ▶



# TOOLS USED



**CRAFTSMAN®**  
24 oz. Steel Ball  
Peen Hammer  
([CMHT54183](#))



**CRAFTSMAN®**  
Precision Hook  
Bi-Material  
Screwdriver Set  
(4 pc.)  
([CMHT65073](#))



**CRAFTSMAN®**  
Pliers Master Set  
(25 pc.)  
([CMHT82625](#))



**CRAFTSMAN®**  
Rechargeable  
Articulating  
Work Light  
([CMMT25165](#))



**CRAFTSMAN®**  
3/8 in. Drive  
Extension Bar Set  
(4 pc.)  
([CMMT43282](#))



**CRAFTSMAN®**  
1/2 in. Drive  
Extension Bar Set  
(3 pc.)  
([CMMT43283](#))



**CRAFTSMAN®**  
1/4 in. Drive  
Extension Bar Set  
(4 pc.)  
([CMMT43394](#))



**CRAFTSMAN®**  
Bristle Brush Set  
(3 pc.)  
([CMMT98312](#))



**CRAFTSMAN®**  
Pry Bar Set  
(3 pc.)  
([CMMT98347](#))



**CRAFTSMAN®**  
Bit Socket and  
External TORX®  
Socket Set  
(25 pc.)  
([CMMT99258](#))



**CRAFTSMAN®**  
Universal Joint Set  
(3 pc.)  
([CMMT99277](#))



**CRAFTSMAN®**  
3/8 in. Drive Digital  
Torque Wrench  
([CMMT99435](#))



**CRAFTSMAN®**  
Mechanic  
Touch Gloves  
([CMMT14194](#))



**CRAFTSMAN®**  
Retrieval Tool Kit  
([CMMT98276](#))



**CRAFTSMAN®**  
Gasket Scraper  
([CMMT98354](#))



**CRAFTSMAN®**  
Razor Blade  
Gasket Scraper  
([CMMT98329](#))



**CRAFTSMAN®**  
1/4 in. Drive  
Round-Head  
Micro-Adjustable  
Torque Wrench  
([TWM200A](#))

## PERSONAL PROTECTIVE EQUIPMENT

Eye Protection | Respiratory Protection | Hearing Protection | Gloves

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# PROJECT INSTRUCTIONS

## STEP 1

Identify the oil leak and its original point of failure. Using a [CRAFTSMAN® V-SERIES™ Flex Head Ratchet](#), remove the vehicle belly pan bolts and visually inspect with a [CRAFTSMAN® 280 Lumen Articulating Light](#).

*Additional CRAFTSMAN® tools used: [V-SERIES™ 3/8 in. Socket Set](#) and [Extension Bar Set](#)*

## STEP 2

Remove the rear seat and fold back the sound deadening mat.

## STEP 3

Using a [CRAFTSMAN® V-SERIES™ Flex Head Ratchet](#), disconnect the battery and tuck the negative terminal down to avoid accidental reconnection.

*Additional CRAFTSMAN® tools used: [V-SERIES™ 3/8 in. Socket Set](#)*

## STEP 4

Using a [CRAFTSMAN® V-SERIES™ Flex Head Ratchet](#), remove the oil drain plug and drain oil from the vehicle.

*Additional CRAFTSMAN® tools used: [V-SERIES™ 3/8 in. Socket Set](#)*

## STEP 5

Reinstall the drain plug using a [CRAFTSMAN® V-SERIES™ Flex Head Ratchet](#) and torque the drain plug to manufacturer specifications.

*Additional CRAFTSMAN® tools used: [3/8 in. Drive Digital Torque Wrench](#) and [V-SERIES™ 3/8 in. Socket Set](#)*

## STEP 6

Remove the air box and air ducting by first removing the left and right air inlets by hand and then removing the main airbox by hand.



# PROJECT INSTRUCTIONS

## STEP 7

Using [CRAFTSMAN® Pliers](#), remove the ignition coil wires from each ignition coil.

## STEP 8

Remove bolts that hold the ignition coils to valve covers by using a [CRAFTSMAN® V-SERIES™ Flex Head Ratchet](#).

*Additional CRAFTSMAN® tools used: [External TORX® Socket Set](#)*

## STEP 9

Remove ignition coils by hand.

## STEP 10

Using [CRAFTSMAN® Pliers](#) and a [Precision Hook Bi-Material Screwdriver](#), remove breather lines that connect to the valve cover.

*Additional CRAFTSMAN® tools used: [V-SERIES™ Screwdriver Set](#)*

## STEP 11

Remove inverted bolts that secure the valve cover with a [CRAFTSMAN® V-SERIES™ Flex Head Ratchet](#). Use a [CRAFTSMAN® 28 oz. Dead Blow Hammer](#) to remove the valve cover.

*Additional CRAFTSMAN® tools used: [V-SERIES™ 3/8 in. Socket Set](#), [External TORX® Socket Set](#), [24 oz. Steel Ball Peen Hammer](#), and [Pry Bar Set](#)*

## STEP 12

Clean parts with degreaser using a [CRAFTSMAN® Bristle Brush](#).



# PROJECT INSTRUCTIONS

## STEP 13

Separate breather cover from valve cover. Clean valve cover and breather cover mating surfaces using a [CRAFTSMAN® Bristle Brush](#) and [CRAFTSMAN® Precision Hook Bi-Material Screwdriver](#).

*Additional CRAFTSMAN® tools used: [Gasket Scraper](#) and [Razor Blade Gasket Scraper](#)*

## STEP 14

Seal breather cover with liquid silicone gasket.

## STEP 15

Replace breather cover bolts. Install breather cover to valve cover and torque bolts using a 1/4 in. Drive Round-Head Micro-Adjustable Torque Wrench.

*Additional CRAFTSMAN® tools used: [External TORX® Socket Set](#)*

## STEP 16

Fit gasket and prep mating surfaces on the engine.

## STEP 17

Install valve cover and torque bolts to manufacturer specifications using a 1/4 in. Drive Round-Head Micro-Adjustable Torque Wrench.

*Additional CRAFTSMAN® tools used: [External TORX® Socket Set](#)*

## STEP 18

Install ignition coils and torque bolts to manufacturer specifications using a 1/4 in. Drive Round-Head Micro-Adjustable Torque Wrench and [CRAFTSMAN® 3/8 in.](#) and [1/2 in. Drive Extension Bar Sets](#).

*Additional CRAFTSMAN® tools used: [External TORX® Socket Set](#)*



# PROJECT INSTRUCTIONS

**STEP 19**

Install airbox and air ducting.

**STEP 20**

Fill engine with oil.

**STEP 21**

Reconnect the battery using a [CRAFTSMAN<sup>®</sup> V-SERIES<sup>™</sup> Flex Head Ratchet](#).  
Install the rear seat.

*Additional CRAFTSMAN<sup>®</sup> tools used: [V-SERIES<sup>™</sup> 3/8 in. Socket Set](#)*

**STEP 22**

Test drive vehicle and reinspect work.

