

TABLE OF CONTENTS

2470 TRACTORS STARTING WITH SN8762940

2670 TRACTORS STARTING WITH SN8763224

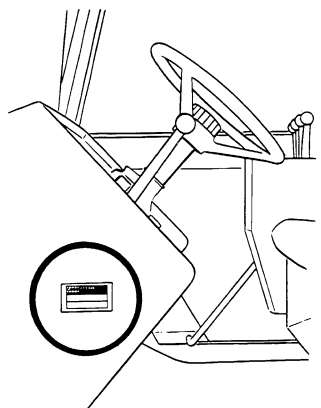
SERIES	SECTION	DESCRIPTION	FORM NUMBER
10	GENERAL		
	1010	General Specifications - 2470 Tractors	9-78077
	1011	General Specifications - 2670 Tractors	9-77977
	1012	Lubrication - 2470 Tractors	9-78089
	1013	Lubrication - 2670 Tractors	9-77989
	1020	Engine - 504 BDT & 504 BDTI	9-45991
	1030	Fuel System - 2470 Tractors	9-76115
	1130	Fuel System - 2670 Tractors	9-77936
	1040	Hydraulic System	9-78097
	1050	Steering System	9-77946
	1060	Power Train	9-78105
	1070	Brake System	9-77965
20	ENGINES		
	2001	Engine Diagnosis	9-76365
	2002	Engine Tune-Up	9-76379
	2010	Parts Removal to Gain Access to Cylinder Heads	9-77995
	2011	Parts Removal to Gain Access to Camshaft	9-78005
	2015	Cylinder Head, Valve Train and Camshaft	9-76166
	2020	Parts Removal to Gain Access to Cyl. Block, Sleeves, Pistons & Rods	9-78125
	2025	Cylinder Block, Sleeves, Pistons and Rods	9-76176
	2031	Parts Removal to Gain Access to Front Oil Seal	9-78065
	2032	Engine Removal	9-78055
	2035	Crankshaft, Main Bearings, Flywheel and Oil Seals	9-76187
	2040	Parts Removal to Gain Access to Oil Pump	9-78135
	2045	Lubrication System, Oil Pump and Heat Exchanger	9-78046
	2050	Parts Removal to Gain Access to Cooling System	9-78145
	2055	Cooling System	9-78157
	2060	Parts Removal to Gain Access to Turbocharger	9-78195
	2065	Turbocharger System	9-78026
	2075	Air Induction System	9-78035
	2110	Engine Front Axle and Transmission Removal	8-23070
	2545	Engine Intercooler System	9-78255
	2555	Engine Lubrication System	9-78385
	2565	Turbocharger Failure Analysis	9-78235
	2290	Reconditioning Engine Cylinder Block	8-21170
30	FUEL SYSTEM		
	3010	Fuel System and Filters	9-75297
	3012	Robert Bosch Fuel Injection Pumps	9-74937
	3013	Roosa Master Fuel Injectors - 2470 Tractors	9-74959
	3113	American Bosch Fuel Injectors - 2670 Tractors	9-77756
40	HYDRAULICS		
	4005	Testing Tractor Hydraulic System	9-78416
	4010	Hydraulic Oil Filters	9-77486
	4011	Triple Hydraulic Pump	9-77537
	4012	Pressure Regulator Valve	9-77496
	4014	Remote Hydraulic Valves	9-77526
	4015	PTO Control Valve	9-77505
	4016	Three Point Hitch System	9-77605
	4017	Hich System Control Valve	9-77615
	4018	Hitch Cylinders	9-77645
	4019	Couplings and Portable Cylinders	9-74197

Reprinted

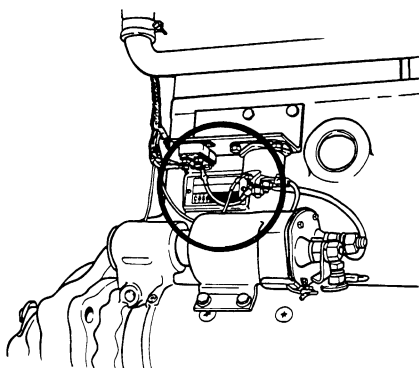
SERIES	SECTION	DESCRIPTION	FORM NUMBER
50	STEERING		
	5005	Testing Tractor Steering System	9-78476
	5010	Steering Column and Pump Valve	9-77547
	5011	Steering Cylinders	9-77555
	5012	Rear Steering Valve	9-77566
	5013	Steering Lines, Linkage and Cables	9-77575
	5014	Front and Rear Steering Adjustments	9-46001
60	POWER TRAIN		
	6001	Trouble Shooting RPS-34 Power Shift	9-76037
	6005	Testing RPS-34 Power Shift and PTO	9-80885
	6012	Axles and Planetaries	9-78317
	6016	Differentials and Drive Shafts	9-78326
	6020	Torque Limiter	9-78215
	6030	RPS-34 Power Shift (Without PTO)	9-78117
	6130	RPS-34 Power Shift (With PTO)	9-78227
	6035	RPS-34 Control Valve and Linkage	9-78246
	6040	Four Speed Transmission	9-78175
	6045	Hydraulic PTO	9-78266
70	BRAKES		
	7010	Brake Pedal, Master Cylinder, Service and Parking Brake	9-77766
80	ELECTRICAL		
	8010	Tractor Electrical Wiring Diagram (Tractor SN8762940 to SN8825000)	9-77686
	8010	Tractor Electrical Wiring Diagram (Starting w/Tractor SN8825001)	9-80985
	8011	Cab Electrical Wiring Diagram (Cab SN7813600 to SN7882601)	9-77698
	8011	Cab Electrical Wiring Diagram (Starting w/Cab SN7882601)	9-80975
	8012	Cranking Motors	9-75366
	8013	Battery Servicing and Testing	9-75377
	8014	Prestolite Alternator System	9-75399
	8114	Delco-Remy Alternator System	9-78976
	8115	Delco-Remy Alternator System	9-45901
	8020	Neutral Start Switch Adjustment	9-78275
90	ACCESSORIES		
	9005	Trouble Shooting Air Conditioning System	9-78895
	9015	Gauging and Testing Air Conditioning System	9-78995
	9025	Compressor Isolation, Removal, Installation and Evacuation - Discharging, Evacuation and Charging and A/C System	9-79015
	9035	Servicing Air Conditioning Components	9-78705
100	HOW IT WORKS		
	14001	Hydraulic System	9-77795
	14011	Triple Hydraulic Pump	9-77725
	14012	Pressure Regulator Valve	9-77705
	14014	Remote Hydraulic Valves	9-77916
	14015	PTO Clutch, Valve and Dropbox	9-77715
	14017	Three Point Hitch Valve	9-77805
	15001	Tractor Steering System	9-77855
	15010	Steering Hand Pump-Valve	9-77815
	15012	Rear Steering Valve	9-77825
	16030	Power Shift	9-77786
	17010	Hydraulic Service Brake	9-77835
	19010	Air Conditioning - Theory of Operation	9-78615

Section 1011

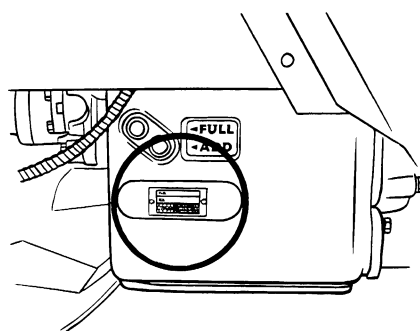
2670 TRACTOR GENERAL SPECIFICATIONS SERIAL NUMBERS



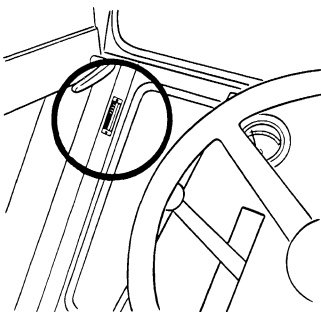
TRACTOR SERIAL NUMBER



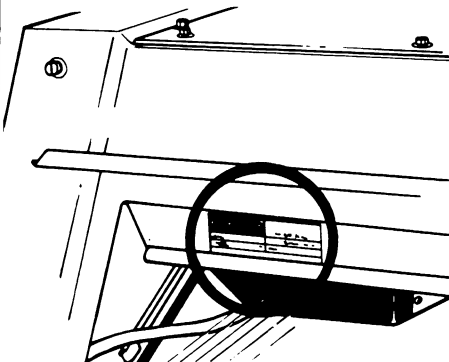
ENGINE SERIAL NUMBER



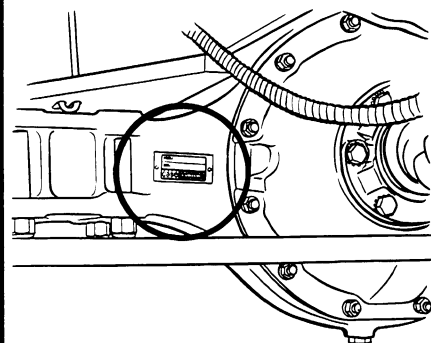
TRANSMISSION SERIAL NUMBER



CAB SERIAL NUMBER



CAB SERIAL NUMBER (IF EQUIPPED)



AXLE SERIAL NUMBER

<https://www.ebooklibonline.com>

Hello dear friend!

Thank you very much for reading.

Enter the link into your browser.

The full manual is available for immediate download.

<https://www.ebooklibonline.com>

DIESEL ENGINE

General

Type	6 Cylinder, 4 Stroke Cycle, Valve-In-Head Intercooled - Turbocharged Diesel Engine
Firing Order	1-5-3-6-2-4
Bore	4-5/8 Inches (117.5mm)
Stroke	5 Inches (127mm)
Piston Displacement	504 Cubic Inches (8 257cm ³)
Compression Ratio	15.8 to 1
Cylinder Sleeves	Removable Wet Type
No Load Governed Speed	2390-2430 RPM
Rated Engine Speed	2200 RPM
Engine Idling Speed	725-775 RPM
*Valve Tappet Clearance (Exhaust)	(Hot) .020 Inch (0.508mm) (Cold) .025 Inch (0.635mm)
(Intake)	(Hot and Cold) .015 Inch (0.381mm)

*Hot Settings Are Made After The Engine Has Operated At Thermostat Controlled Temperature For At Least Fifteen Minutes.

Piston and Connecting Rod

Rings per Piston	3
Number of Compression Rings	2
Number of Oil Rings	1
Type Pins	Full Floating Type
Type Bearings	Replaceable Precision, Steel Back with Aluminum or Copper-Lead Alloy Liners.

Main Bearings

Number of Bearings	7
Type Bearings	Replaceable Precision, Steel Back with Aluminum or Copper-Lead Alloy Liners.

Engine Lubrication System

Oil Pressure	45 to 60 PSI (310 to 414 kPa) with Engine Warm and Operating at Rated Engine Speed.
Type System	Pressure and Spray Circulation
Oil Pump	Gear Type
Oil Filter (2)	Full Flow Spin on Type
Oil Capacity	With Filters, 28 U.S. Qts. (26.5 litres) Without Filters, 24 U.S. Qts. (22.7 litres)
Piston Oil Cooling	Nozzle Pressure Spray (From Main Bearings)

Hydraulic Pump

Type	Direct Drive, Gear Type Triple Hydraulic Pump
First Section	Charging Pump, Capacity at 2200 Engine RPM - 39 GPM (147.6 l/min.)
Intermediate Section	Supplies oil to the Transmission, Hydraulic and PTO. Capacity at 2200 Engine RPM - 17 GPM (64.4 l/min.)
Third Section	Supplies oil to the Steering System. Capacity at 2200 Engine RPM 17 GPM (64.4 l/min.)
Front Steering	7 GPM (26.5 l/min.)
Rear Steering	10 GPM (37.9 l/min.)

Hydrostatic Front Power Steering

Oil Supply	Triple Hydraulic Pump
HGA Hydrostatic Type	Integral and Bi-Directional Gerotor Metering Section, Actuated By the Steering Wheel.
Front Steering Cylinders	Two Double Acting Cylinders

Rear Power Steering

Oil Supply	Triple Hydraulic Pump
Control Valve Type	4 Way, Three Position Spool Type.
Rear Steering Cylinders	Two Double Acting Cylinders
Controls	Hand Lever on Instrument Panel (Manual or Automatic)

Differential and Planetaries

Front and Rear	Spiral Bevel with Planetary Reduction in Hub.
Differential Oil Cap. Ea. (Front & Rear)	24 U.S. Quarts (22.7 Litres)
Planetary Oil Cap. Ea. (Front & Rear)	11 U.S. Quarts (10.4 Litres)

3 Point Hitch System

Type Control	Hand Lever
Type Valve	3 Positions - Raise - Hold - Lower with Speed Control
Type Draft Arms	Rigid Swinging, with Manual Float Adjustment
Type Hitch	3 Point-Category III
Hitch Coupler	Case Available - Category III

Operator's Cab

The Case Tractor Operator's Cabs are equipped with built-in rollover protection (ROPS) as specified in ASAE Standard S-336.1, SAE Standard J168a, and OSHA Regulation 1928.53, Approval Number CA R231.

R.H. Dual Remote Hydraulic System

Power Take-Off

Drawbar

Tire and Wheel Equipment Front and Rear

*18.4-34, 6 ply tires can only be used with duals and on outside tires only.

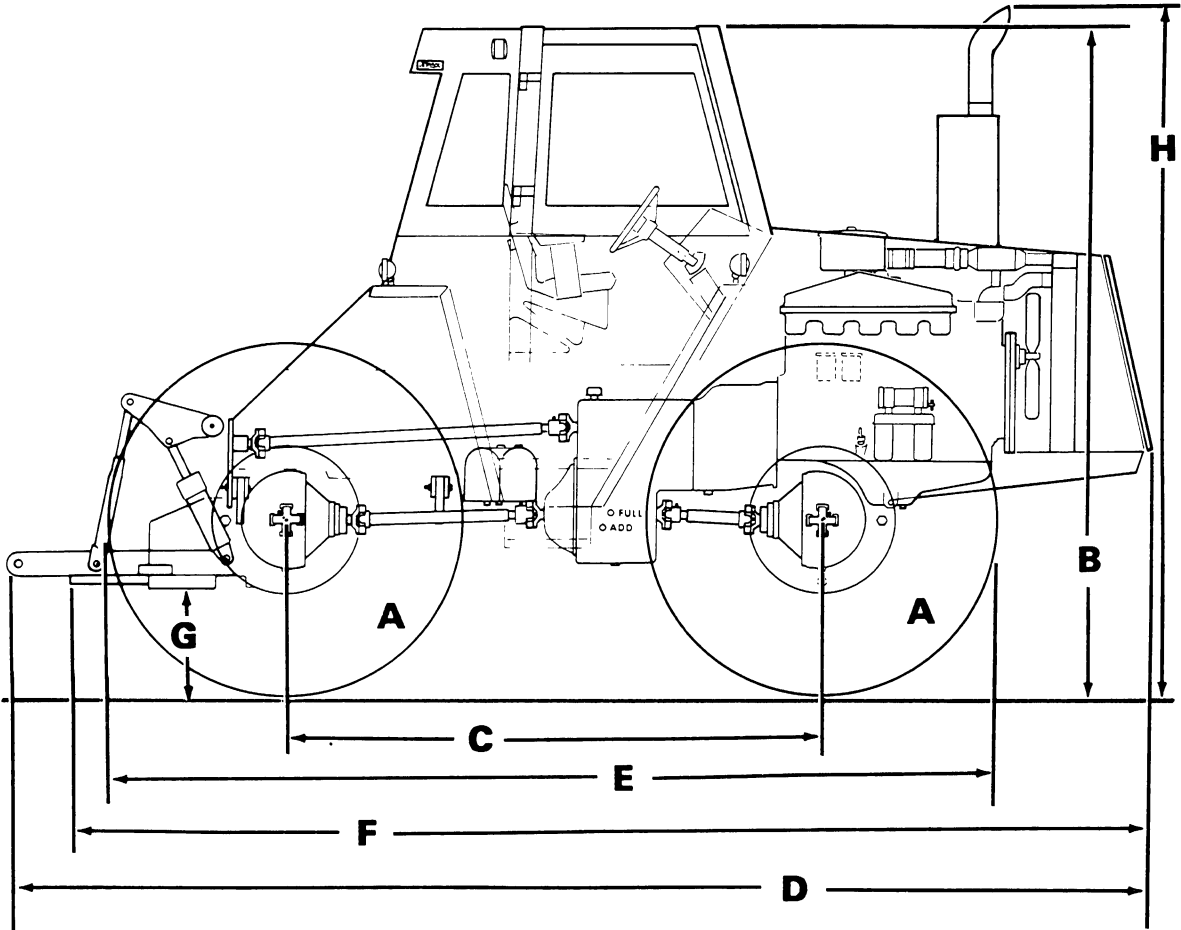
****Minimum inflation pressure for single tires.**

***Absolute minimum inflation pressure for tires used as duals is 12 PSI (82.7 kPa).

**Approximate Travel Speeds in MPH
and KM/H at 2200 Engine RPM
12 Speed Power Shift Transmission**

TRANSMISSION RANGE	POWER SHIFT			TIRE SIZE
	1	2	3 AND REVERSE	
1	2.0 mph (3.2 km/h)	2.7 mph (4.4 km/h)	3.4 mph (5.5 km/h)	23.1-30
2	3.1 mph (5.0 km/h)	4.1 mph (6.6 km/h)	5.1 mph (8.2 km/h)	
3	4.3 mph (6.9 km/h)	5.8 mph (9.3 km/h)	7.2 mph (11.6 km/h)	
4	8.0 mph (12.9 km/h)	10.6 mph (17.1 km/h)	14.5 mph (23.3 km/h)	
1	2.0 mph (3.2 km/h)	2.7 mph (4.4 km/h)	3.3 mph (5.3 km/h)	18.4-34
2	3.0 mph (4.8 km/h)	4.1 mph (6.6 km/h)	5.1 mph (8.2 km/h)	
3	4.3 mph (6.9 km/h)	5.7 mph (9.2 km/h)	7.1 mph (11.4 km/h)	
4	7.9 mph (12.7 km/h)	10.5 mph (16.9 km/h)	14.5 mph (23.3 km/h)	
1	2.1 mph (3.4 km/h)	2.8 mph (4.5 km/h)	3.5 mph (5.6 km/h)	20.8-34
2	3.2 mph (5.2 km/h)	4.2 mph (6.8 km/h)	5.3 mph (8.5 km/h)	
3	4.4 mph (7.1 km/h)	5.9 mph (9.5 km/h)	7.4 mph (11.9 km/h)	
4	8.2 mph (13.2 km/h)	10.9 mph (17.5 km/h)	15 mph (24.1 km/h)	

Approximate Overall Measurements



A	TIRE	WHEEL RIM	F	207 Inches (5 258mm)	
	23.1-30 R1	W20L-30			
B	125 Inches (3 175mm)	D	218 Inches (5 537mm)	G	18 Inches (457mm)
C	102 Inches (2 591mm)	E	168 Inches (4 267mm)	H	130 Inches (3 302mm)

Overall Width (Minimum) 96 Inches (2 438mm)
Turning Radius (Minimum) 192 Inches (4 877mm)
Overall Length with Hitch Coupler 225 Inches (5 715mm)
Rear Axle Oscillation 30°

Approximate Weight

4 Wheel Steering w/18.4 x 34 Tires 16,370 Pounds (7 425 kg)

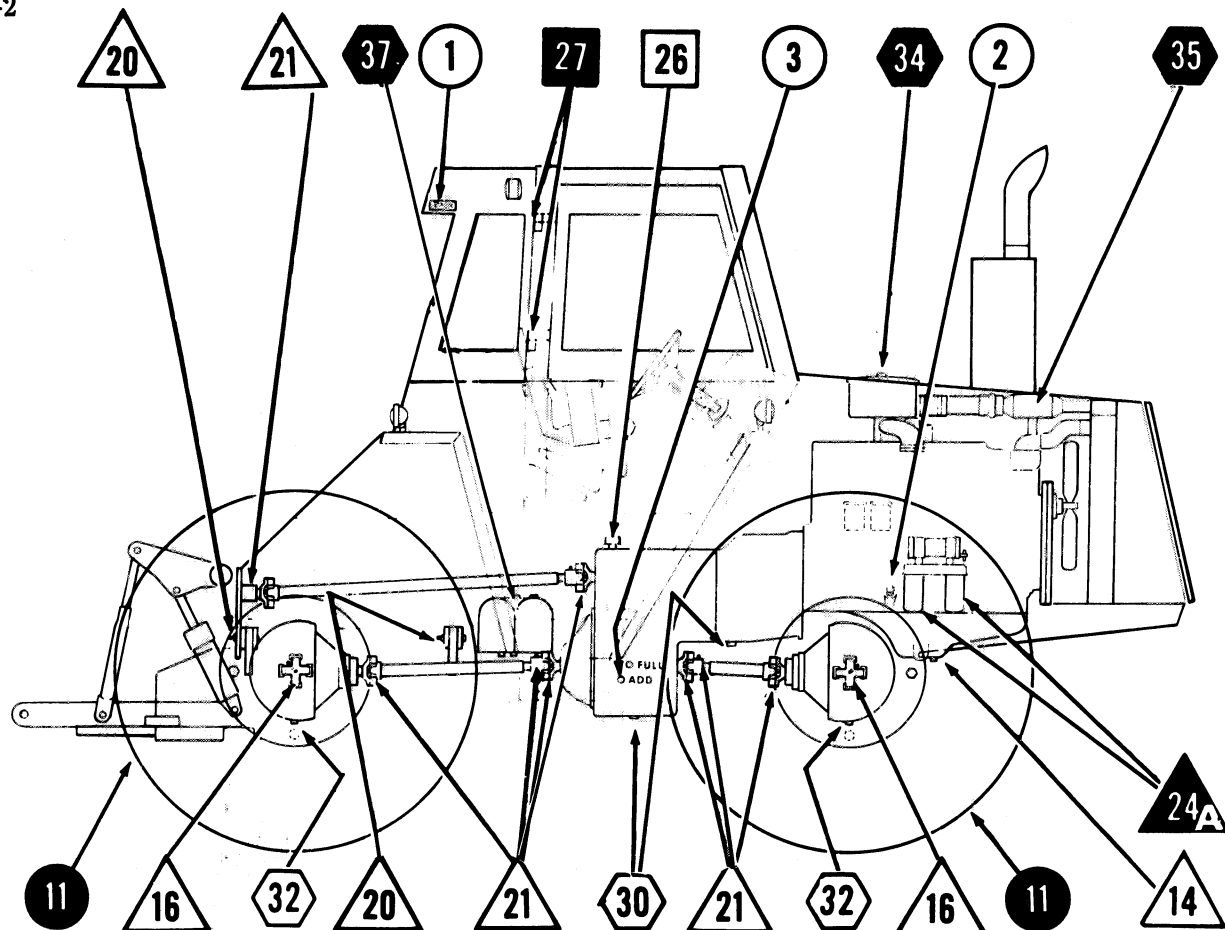
IMPORTANT: The total tractor weight with ballast and weights must not exceed 25300 lbs. (11 475 kg).

Section 1012

2470 TRACTOR

LUBRICATION

(Starting with Tractor SN 8762940)



LUBRICATION POINTS	APPROXIMATE CAPACITIES			PREVAILING AIR TEMPERATURE RANGES AND LUBRICANTS		
	U.S. MEASURE	METRIC MEASURE	IMPERIAL MEASURE	32°F. (0°C.) and Above	10°F. (-12°C.) To 50°F. (10°C.)	Use Only Below 40°F. (4.4°C.)
Engine Crankcase W/O Filter	19 Qts.	18 Litres	15.8 Qts.	SAE 30	SAE 20W	SAE 10W
Engine Crankcase W/Filter	23 Qts.	21.8 Litres	19.2 Qts.	CASE HDM		
Transmission Hydraulic System Without PTO	56 Qts.	53 Litres	46.6 Qts.	Without Spin-On Filters	USE CASE TFD FLUID	
	54 Qts.	51.1 Litres	45.0 Qts.	With Spin-On Filters		
Transmission Hydraulic System With PTO	60 Qts.	56.8 Litres	50 Qts.	Without Spin-On Filters		
	58 Qts.	54.9 Litres	48.3 Qts.	With Spin-On Filters		
Cooling System	44 Qts.	41.6 Litres	36.6 Qts.	Use a Top Brand "High Boiling Point" Type Anti-Freeze. Use 1 Pint (.5 Litre) Case Cooling System Treatment 331-508 Annually.		
Fuel Tank (Each Tank)	55 Gals.	208.2 Litres	45.8 Gals.	Use a Good Grade Number 2 Diesel Fuel		
Differential Housing (Each-Front & Rear)	19 Qts.	18 Litres	15.8 Qts.	PREVAILING AIR TEMPERATURES		
				Above 90°F. (32.2°C.)	90°F. (32.2°C.) To 0°F. (-17.8°C.)	Below 0°F. (-17.8°C.)
Planetary Housings (Each-Front & Rear)	11 Qts.	10.4 Litres	9.2 Qts.	SAE 140 EP	SAE 90 EP	SAE 80 EP
Hydraulic Brake Master Cylinder	1 2 in. (12.7mm) Below Opening			Warning! Use Only Case TFD Fluid		
All Pressure Fittings	As Many Strokes As Required			PREVAILING AIR TEMPERATURES		
				32°F. (0°C.) and Above		Below 32°F. (0°C.)
				Use a Good No. 2 Lithium Gun Grease		Use a Good No. 1 Lithium Gun Grease

LOW ENGINE OIL PRESSURE

INTERNAL PROBLEMS (Cont'd)

11. Internal Oil Passage Leak

A crack, missing plug, or bad "O" ring could cause an internal oil gallery leak resulting in low oil pressure readings. Another possible leak is the "O" ring that seals between the engine oil pump and oil gallery. If such leakage is suspected, attach air pressure to the oil gallery and watch for leaks with oil pan removed.

12. Key In Oil Pump Gear Worn

The key in the oil pump drive gear could become worn and shear. Remove oil pan and oil pump, disassemble oil pump and inspect.

13. Camshaft Bearing Worn

A camshaft bearing knock is not a very sharp knock. The knock will be only at one-half of crankshaft speed and will not become worse at different engine speeds. By grounding out two or more cylinders at high RPM,

the knock usually decreases. Low oil pressure could result from worn bearings and excessive oil clearance from lack of replacing cam bearing at engine overhaul.

14. Piston Ring Installation Faulty or Broken Rings

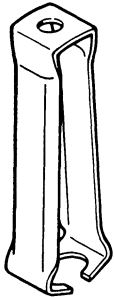
Many times piston rings are installed wrong, upside down, wrong size, or expanders are cut-off on three piece oil rings and overlapping the expander. Be sure to carefully read instructions before installing piston rings. Damaged rings can cause scoring of the piston and sleeves and cause the engine to use oil.

15. Turbo-Charger Seal Damaged

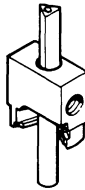
Seal leakage or failure in a turbo-charger will allow the lubricating oil to be drawn into the engine intake manifold and burned in the engine. Inspect turbo-charger compressor and turbine wheel for signs of lubricating oil.

INSTALLATION INSTRUCTIONS FOR M20614 TEFLON VALVE SEAL KIT

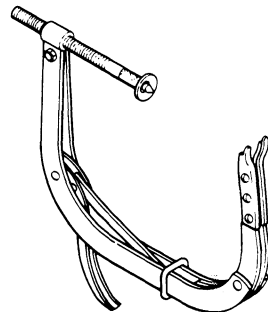
Special Tools Required



M20624 SEAL INSTALLATION TOOL



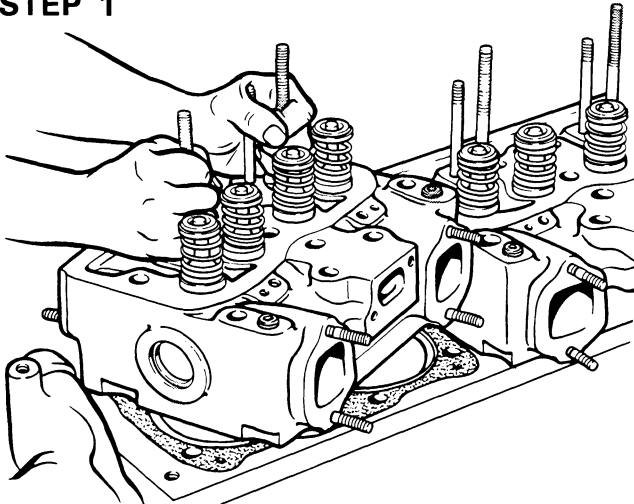
M20617 VALVE GUIDE CUTTING TOOL



VALVE SPRING COMPRESSOR

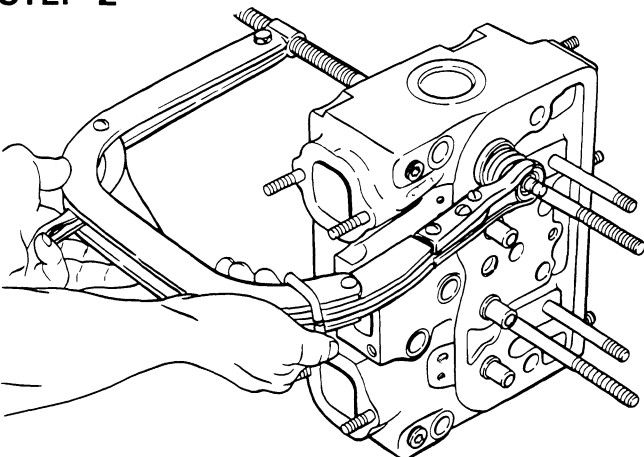
NOTE: FOUR CYLINDER ENGINES REQUIRE TWO M20614 KITS AND SIX CYLINDER ENGINES REQUIRE THREE M20614 KITS.

STEP 1



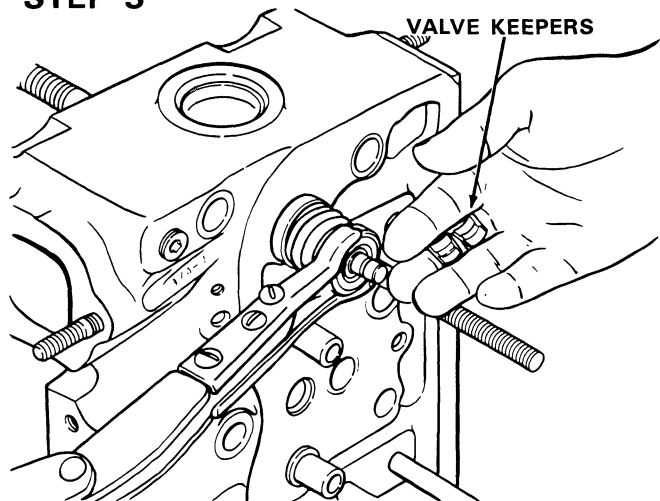
REMOVE THE CYLINDER HEADS FROM THE ENGINE, REFER TO SECTION 2015 FOR HEAD REMOVAL.

STEP 2



INSTALL A VALVE SPRING COMPRESSOR.

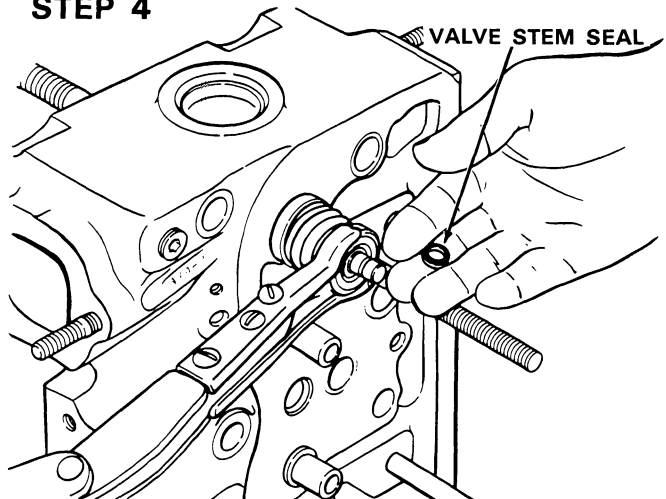
STEP 3



COMPRESS VALVE SPRING AND REMOVE VALVE KEEPERS.

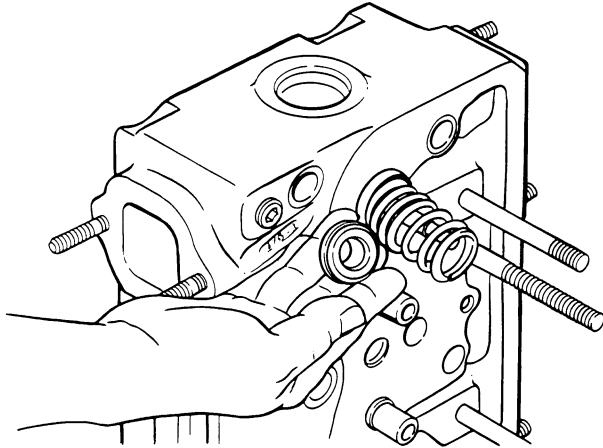
IMPORTANT: VALVES, VALVE RETAINERS OR ROTATORS AND VALVE KEEPERS SHOULD BE MARKED WHEN REMOVED, TO INSURE THAT THEY WILL BE REINSTALLED IN THEIR ORIGINAL LOCATION.

STEP 4



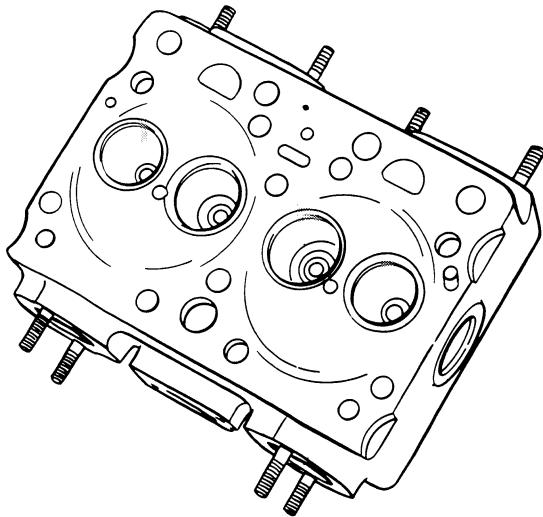
REMOVE VALVE STEM SEAL.

STEP 5



REMOVE VALVE ROTATORS OR SPRING RETAINERS, SPRINGS, SPRING SEATS AND VALVES.

STEP 6



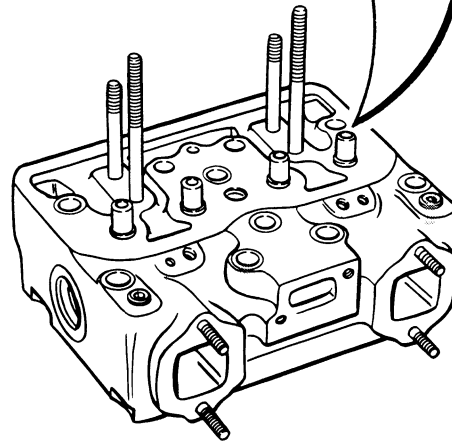
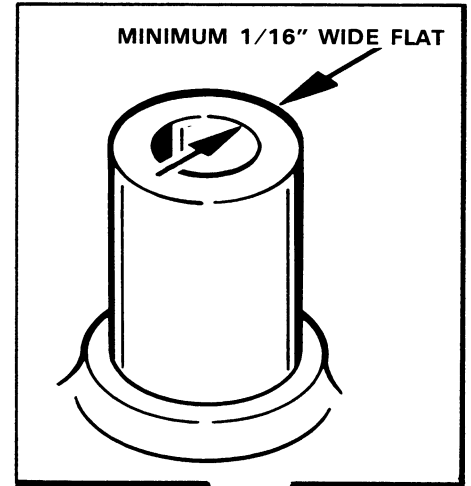
CLEAN CYLINDER HEAD COMPLETELY, REMOVING ALL TRACES OF CARBON AND OTHER DEPOSITS.

STEP 7



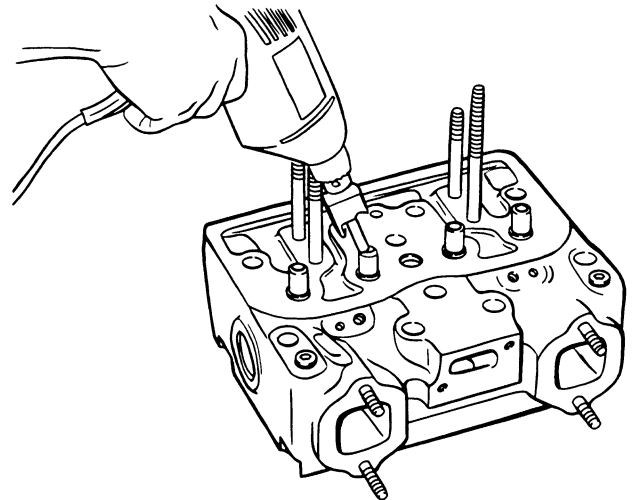
CLEAN VALVES WITH A FINE POWER DRIVEN WIRE BRUSH, REMOVING ALL CARBON AND VARNISH DEPOSITS. BE CAREFUL NOT TO SCRATCH VALVE STEMS.

STEP 8



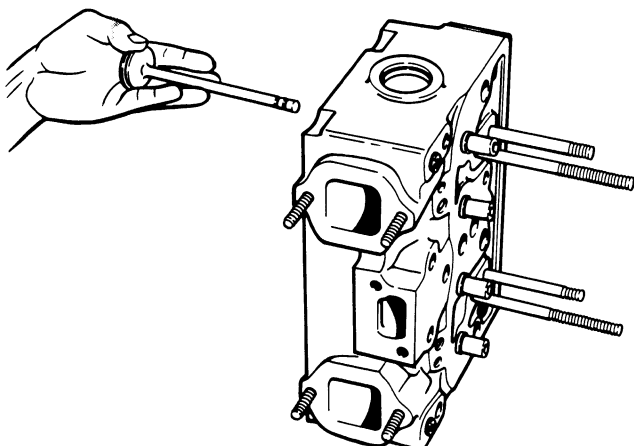
CHECK VALVE GUIDE TOP SURFACE, THERE MUST BE A MINIMUM OF A 1/16" WIDE FLAT AROUND ENTIRE TOP SURFACE.

STEP 9



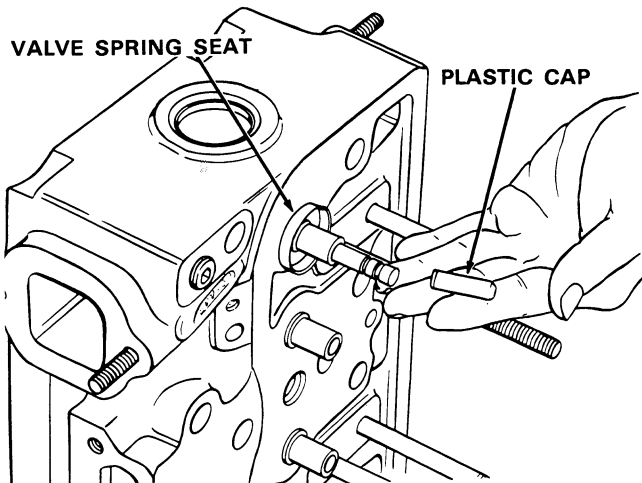
USE M20617 TOOL IN A ELECTRIC DRILL (IF REQUIRED) TO PROVIDE NECESSARY FLAT AREA ON VALVE GUIDE. IMPORTANT: DO NOT EXCEED 450 RPM WHEN DRILLING

STEP 10



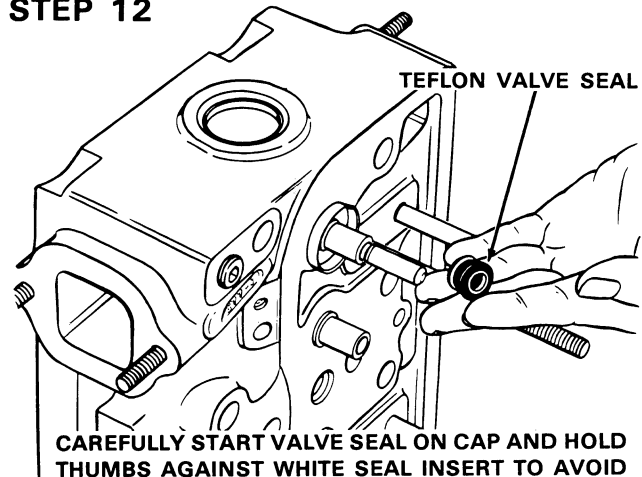
LUBRICATE VALVES WITH CLEAN ENGINE OIL BEFORE REINSTALLING INTO CYLINDER HEAD.

STEP 11



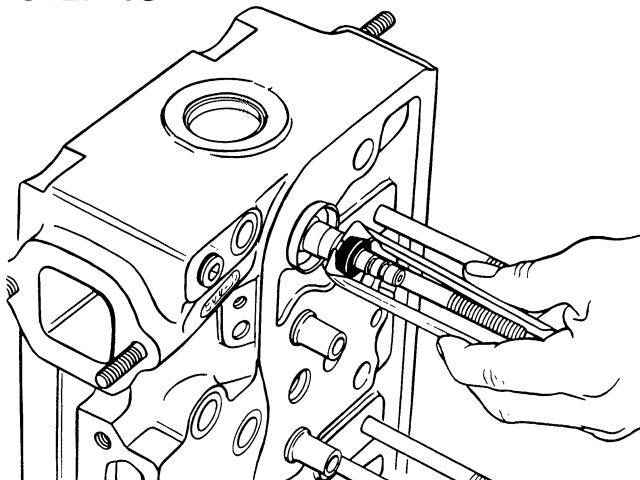
PLACE PLASTIC INSTALLATION CAP, PROVIDED IN KIT, ON THE END OF THE VALVE STEM. NOTE: CAP PREVENTS SHARP EDGES ON VALVE STEM GROOVES FROM CUTTING VALVE SEAL.

STEP 12



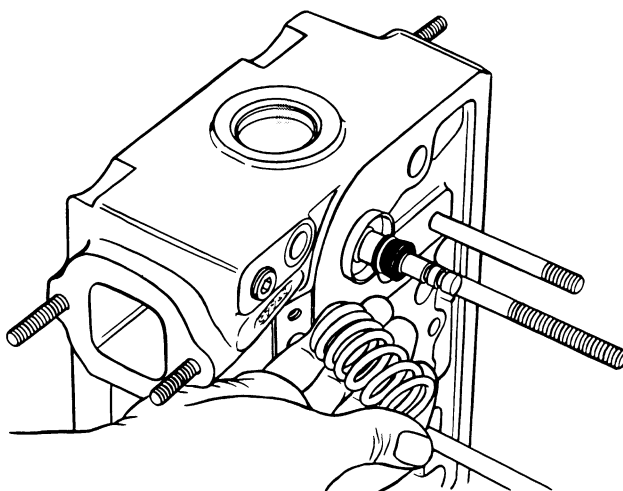
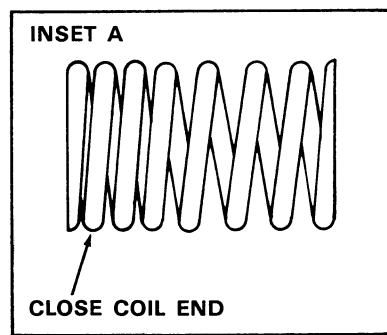
CAREFULLY START VALVE SEAL ON CAP AND HOLD THUMBS AGAINST WHITE SEAL INSERT TO AVOID DISLODGING IT, PUSH SEAL DOWN UNTIL SEAL JACKET TOUCHES TOP OF VALVE GUIDE. REMOVE INSTALLATION CAP AND SAVE, SINCE IT MUST BE REUSED.

STEP 13

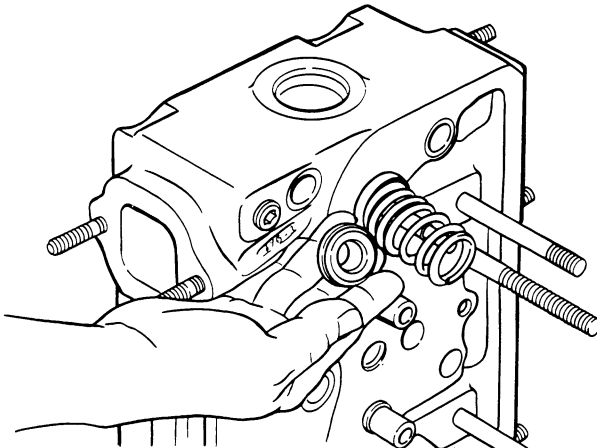


USE M20624 TOOL AND PRESS SEAL DOWN OVER VALVE GUIDE UNTIL SEAL IS FLUSH WITH TOP OF GUIDE.

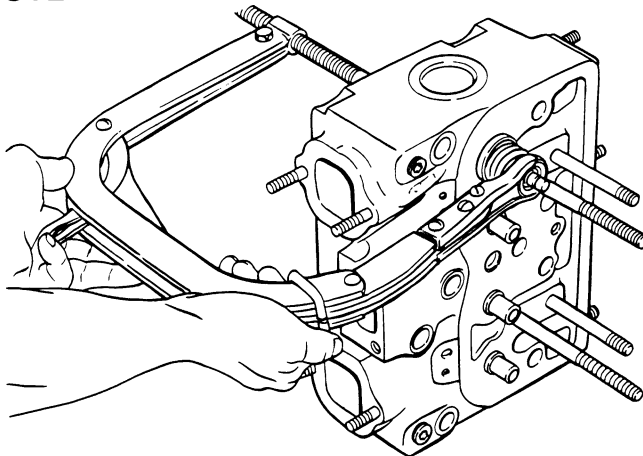
STEP 14



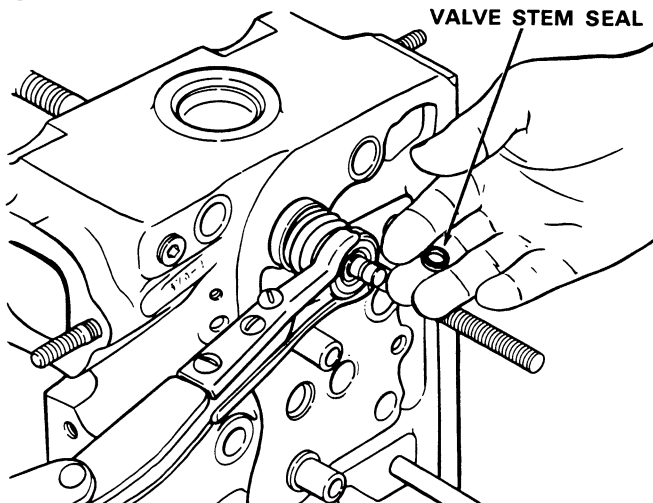
INSTALL THE VALVE SPRING. IMPORTANT: THE CLOSE COIL END OF THE SPRING MUST BE INSTALLED TOWARDS THE CYLINDER HEAD, SEE INSET A.

STEP 15

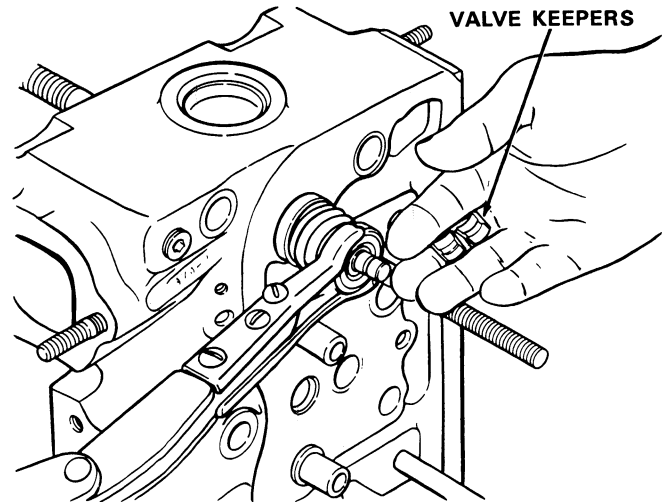
INSTALL VALVE ROTATORS OR SPRING RETAINERS. IMPORTANT: ASSEMBLE VALVE ROTATORS WITH THEIR ORIGINAL VALVES SINCE THEY TEND TO WEAR IN AS A MATCHED SET.

STEP 16

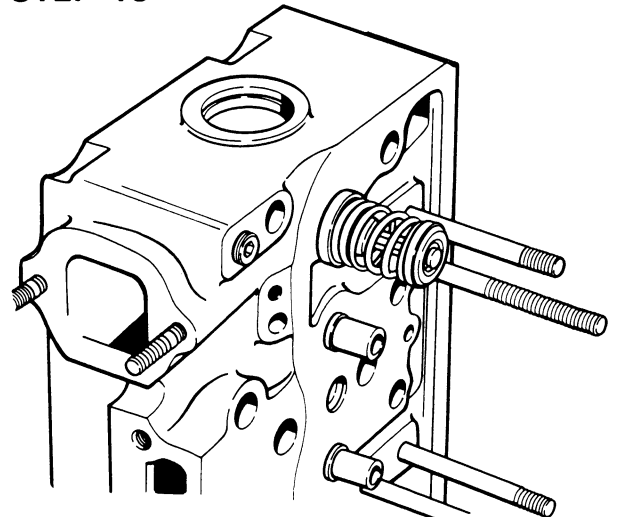
INSTALL VALVE SPRING COMPRESSOR.

STEP 17

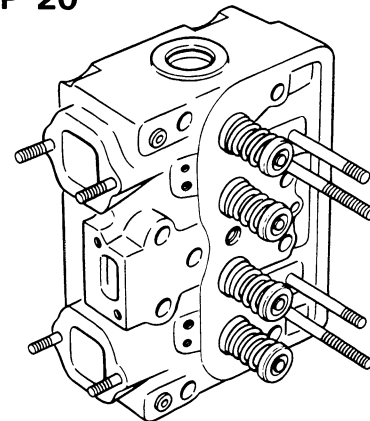
INSTALL STEM SEAL IN LOWER VALVE STEM GROOVE.

STEP 18

INSTALL VALVE KEEPERS IN OUTER VALVE STEM GROOVE.

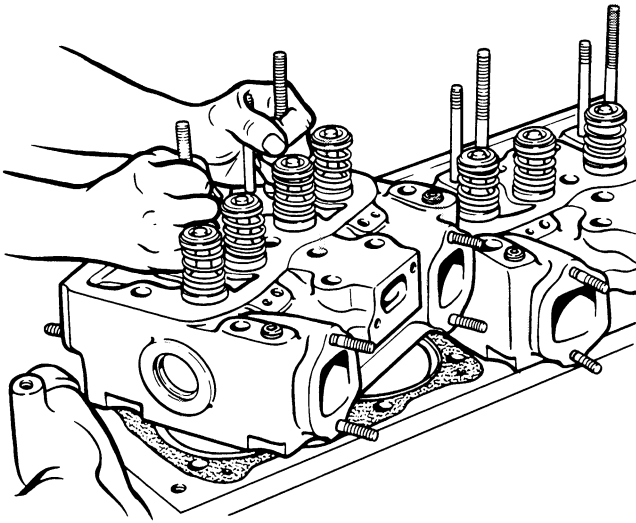
STEP 19

REMOVE SPRING COMPRESSOR AND TAP VALVE STEM END TO SEAT KEEPERS.

STEP 20

INSTALL TEFLON SEALS ON THE OTHER INTAKE AND EXHAUST VALVES, FOLLOWING THE PRECEDING PROCEDURE.

STEP 21



REINSTALL CYLINDER HEAD ON ENGINE FOLLOWING PROCEDURE OUTLINED IN SECTION 2015.

NOTE: The CASE CORPORATION reserves the right to make improvements in design or changes in specifications at any time without incurring any obligation to install them on units previously sold.

Section 2002

ENGINE TUNE-UP

ENGINE TUNEUP

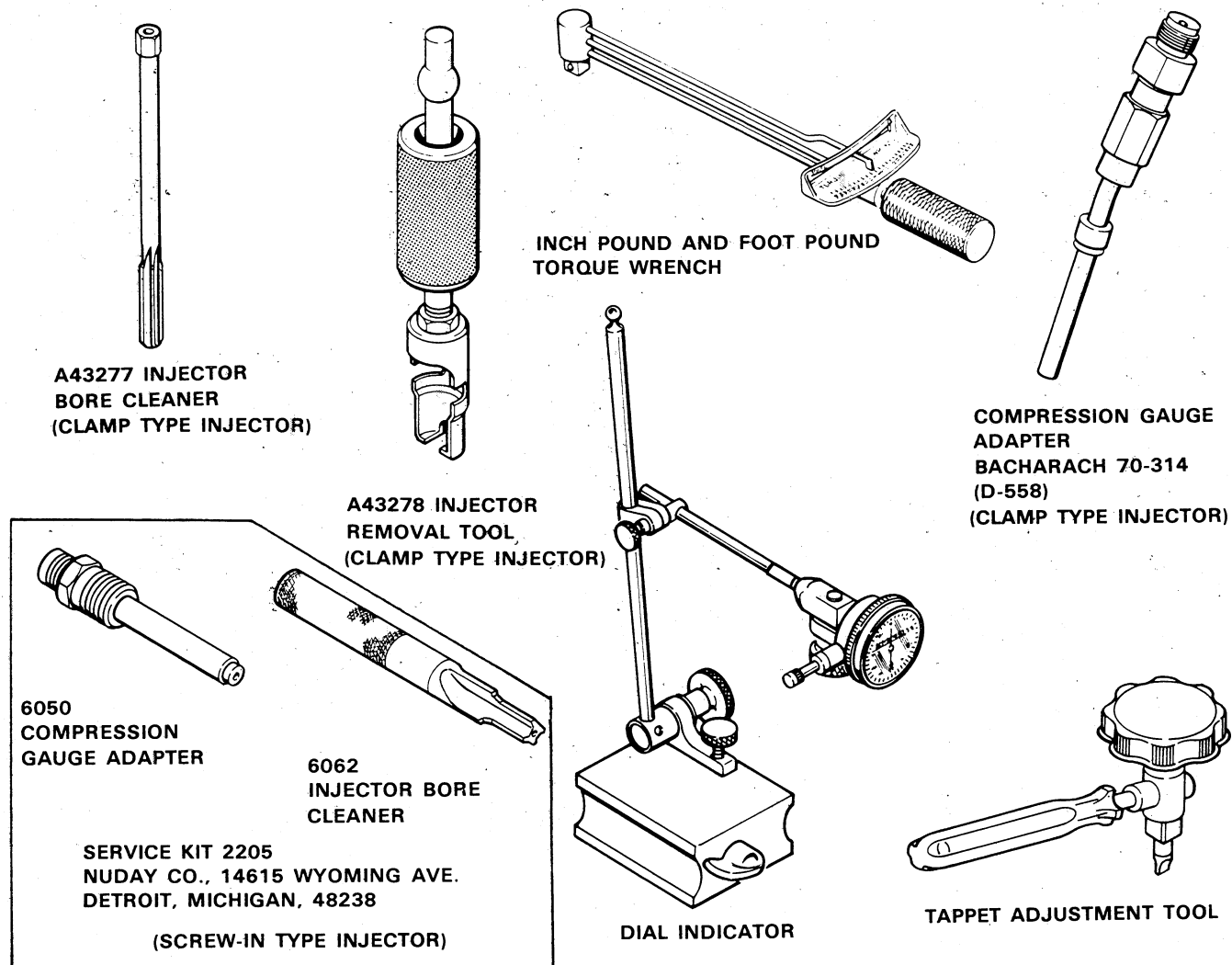
A COMPLETE ENGINE TUNEUP INCLUDES THE PERFORMING OF THE FOLLOWING ITEMS:

Air Intake System - Cleaning	Page 19
Compression Check	Pages 14-17
Crankshaft Damper Pulley - Check	Page 4
Fan Belts - Adjusting	Page 20
Fuel Line Screen and Filters - Cleaning	Page 17
Injection Pump - Retiming	Page 18
Nozzle Removal	Page 14
Nozzle Spray Pattern - Checking	Page 14
Speed Adjusting - Governed	Page 19
Tappets - Adjusting	Pages 9-13
Cold Setting	Pages 9,10
Hot Setting With Engine Stopped	Pages 11, 12
Tools Required For Tuneup	Page 3
Top Dead Center - Checking	Pages 5-8
Valve Timing - Check	Page 21



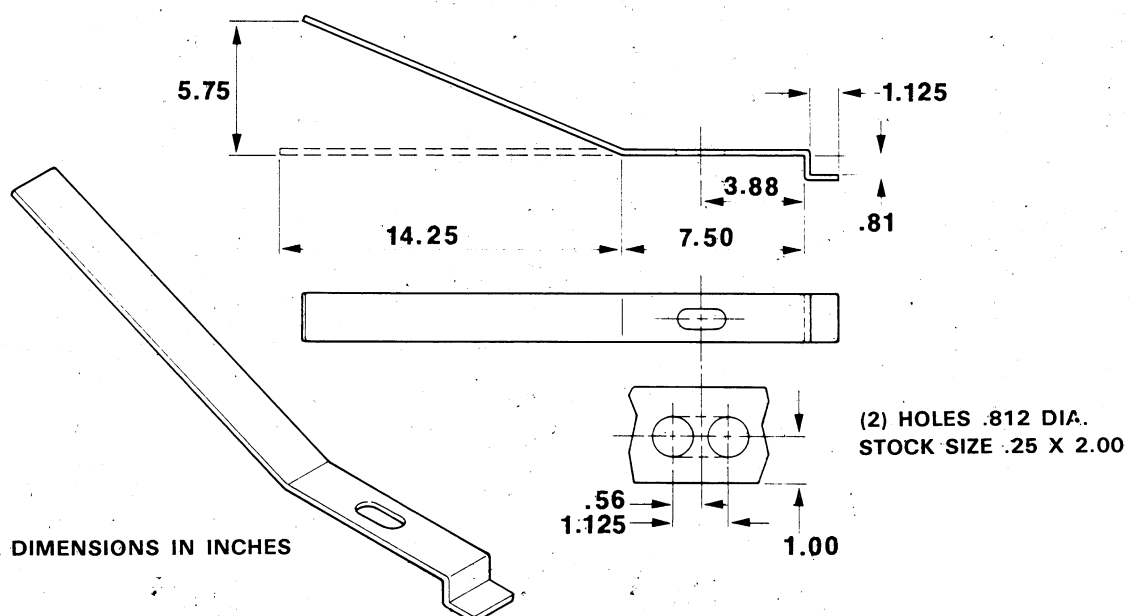
THIS SAFETY ALERT SYMBOL INDICATES IMPORTANT SAFETY MESSAGES IN THIS MANUAL. WHEN YOU SEE THIS SYMBOL, CAREFULLY READ THE MESSAGE THAT FOLLOWS AND BE ALERT TO THE POSSIBILITY OF PERSONAL INJURY.

SPECIAL TOOLS



SPECIFICATIONS FOR TOOLS WHICH MUST BE MADE

Valve Spring Compressor Tool



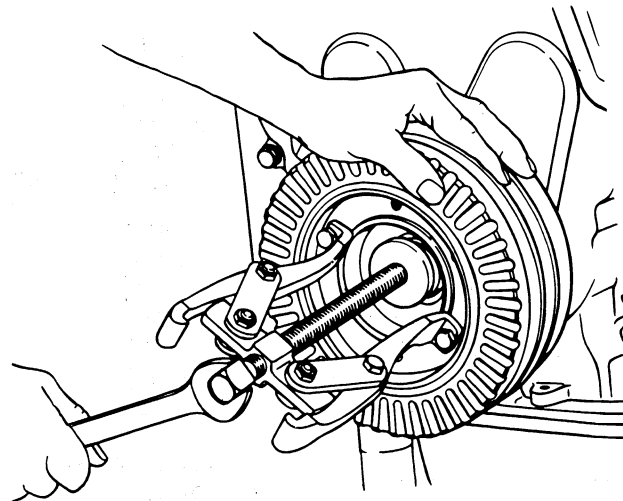
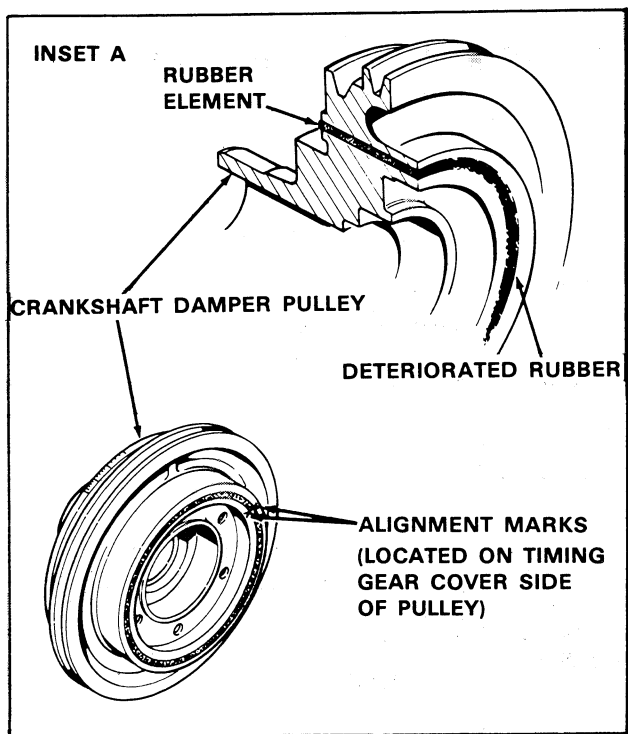
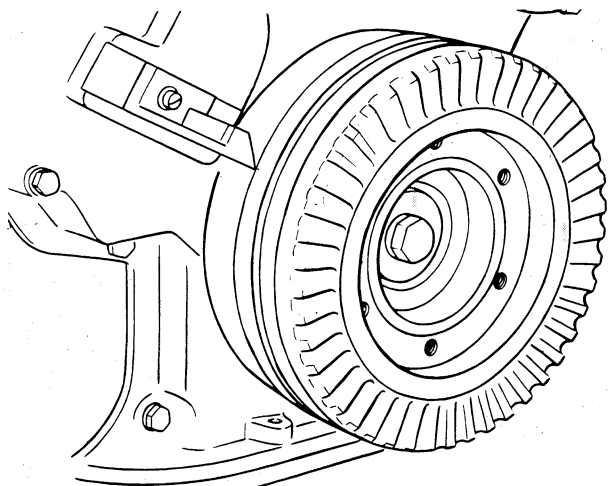
ENGINE TUNEUP PROCEDURE

Checking Crankshaft Damper Pulley

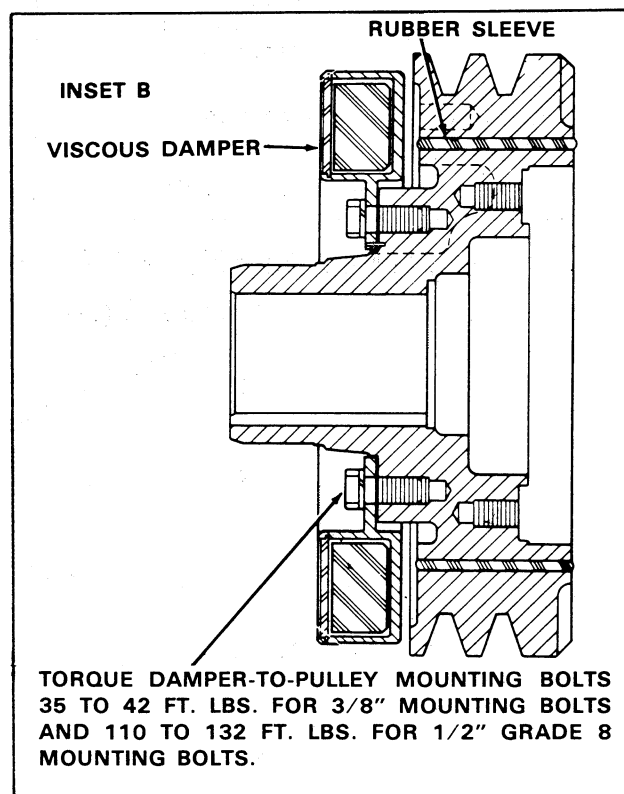
STEP 1

THE RECOMMENDED CHANGE INTERVAL FOR THE CRANKSHAFT DAMPER PULLEY IS 2000 HOURS MAXIMUM. AT ANY TIME OVER 1500 HOURS. CONSIDER CHANGING PULLEY AT ANY MAJOR ENGINE OVERHAUL OR TUNE UP.

EVERY 500 HOURS AND AT ENGINE TUNEUP, VISUALLY INSPECT RUBBER ELEMENT FOR PEEL AREAS OR RUBBER MISSING. CHECK ALIGNMENT OF THE "V" MARKS BETWEEN THE INNER AND OUTER MEMBERS. IF "V" MARKS SHIFT, ENGINE TIMING WILL BE OFF AND DAMPER PULLEY MUST BE REPLACED.

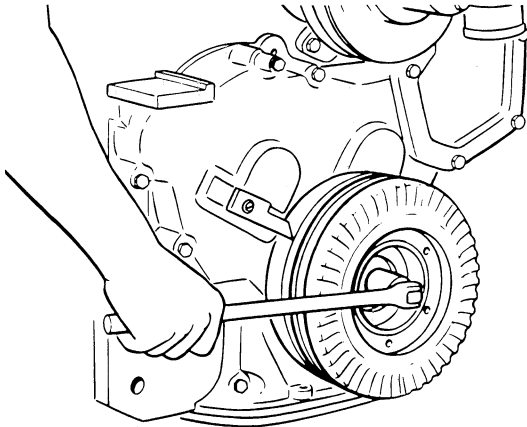


USE BOLT ON TYPE PULLER TO REMOVE PULLEY. REMOVE VISCOUS DAMPER FROM PULLEY (IF SO EQUIPPED). DO NOT PULL OR HAMMER ON OUTSIDE OF PULLEY OR VISCOUS DAMPER; SERIOUS DAMAGE TO PULLEY, DAMPER, AND RUBBER SLEEVE COULD RESULT.



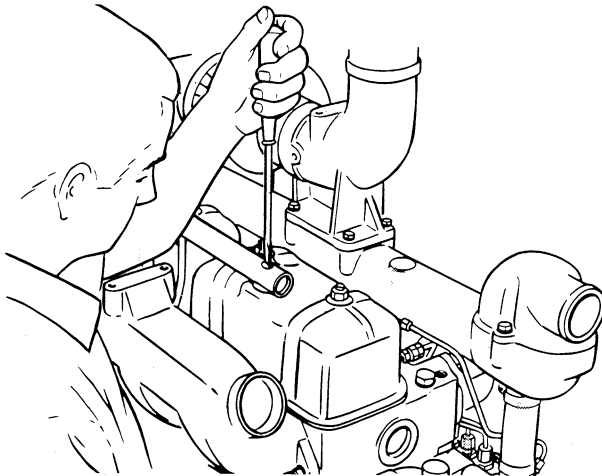
Checking Top Dead Center

STEP 2



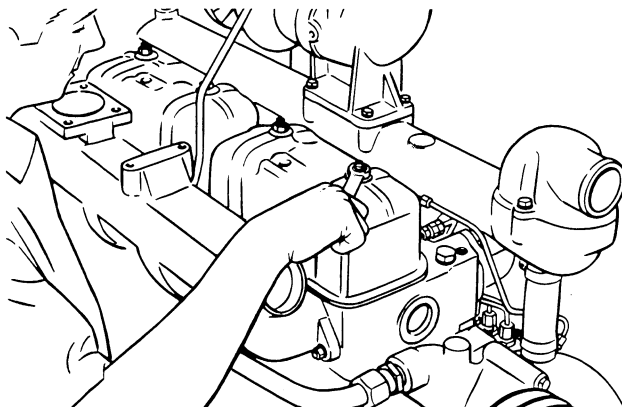
CRANK ENGINE UNTIL 10° BTDC MARK ON CRANK-SHAFT PULLEY IS ALIGNED WITH TIMING POINTER.

STEP 3



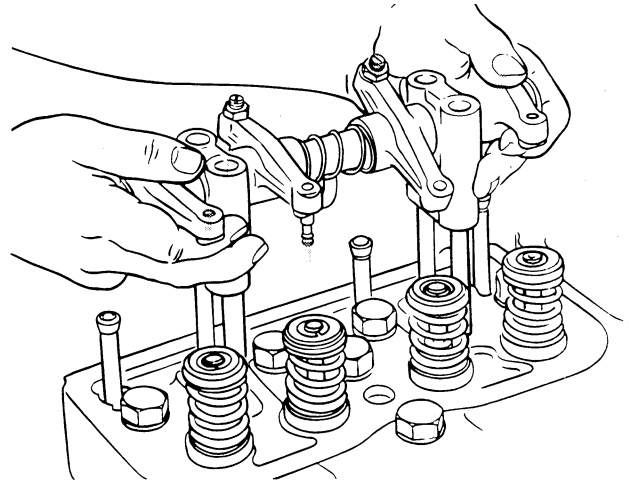
REMOVE BREATHER TUBE.

STEP 4



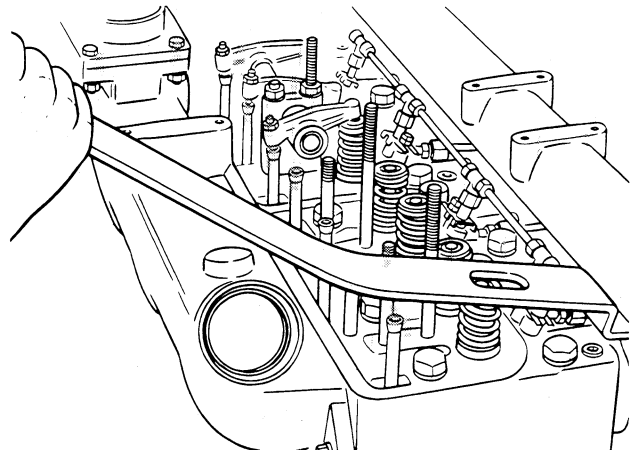
REMOVE VALVE COVER AND GASKET FROM NO. 1 AND NO. 2 CYLINDERS.

STEP 5



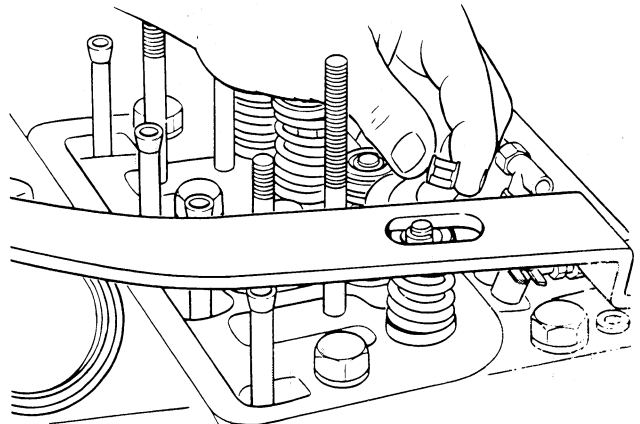
REMOVE ROCKER ARM ASSEMBLY.

STEP 6



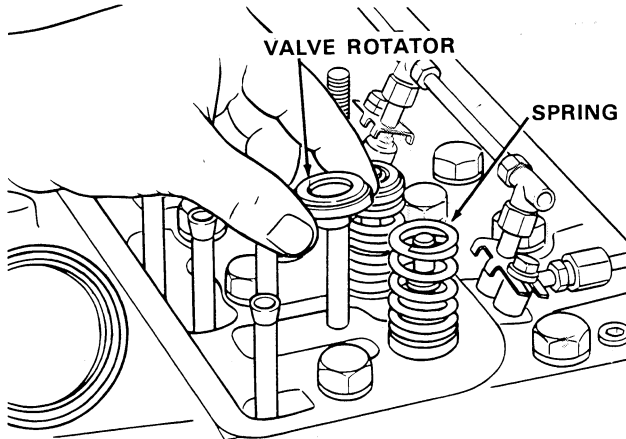
COMPRESS EXHAUST VALVE SPRING ON NO. 1 CYLINDER USING FABRICATED TOOL (SEE PAGE 3).

STEP 7



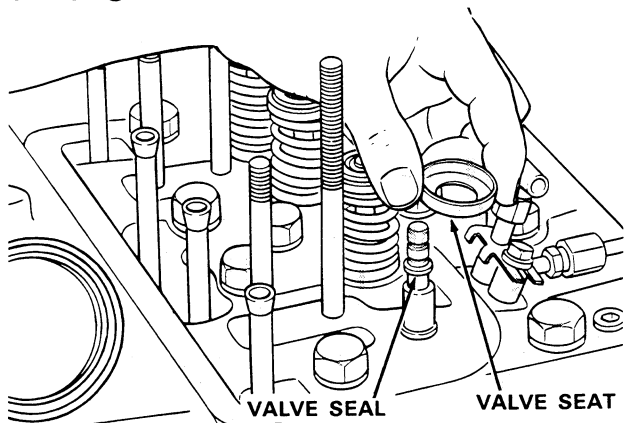
REMOVE VALVE KEEPERS

STEP 8



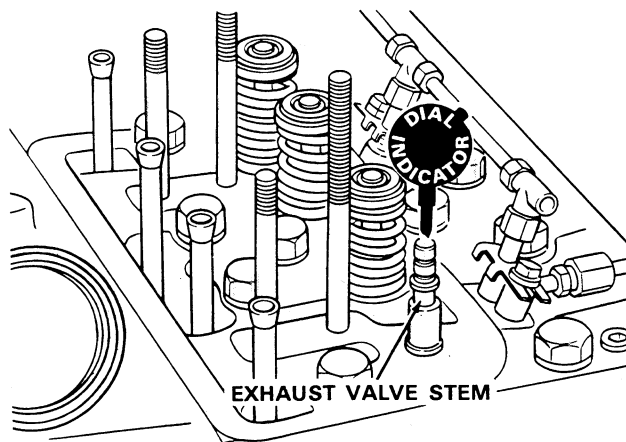
REMOVE VALVE ROTATOR, SPRING AND SEAT.

STEP 9

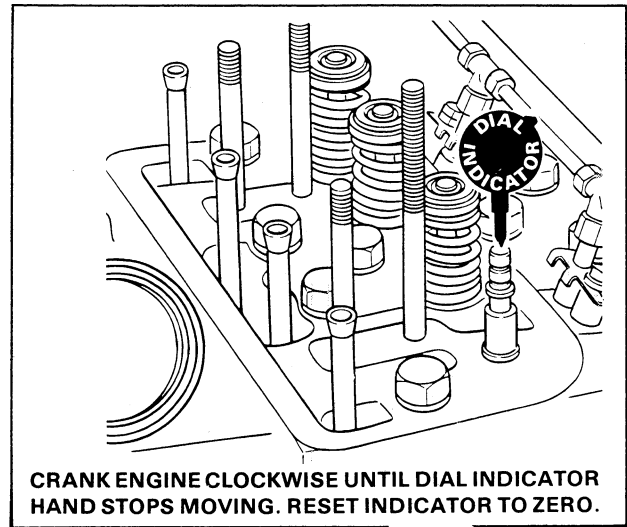


KEEP VALVE SEAL IN PLACE TO PREVENT VALVE FROM FALLING THROUGH VALVE GUIDE IF PISTON IS MOVED TOO FAR

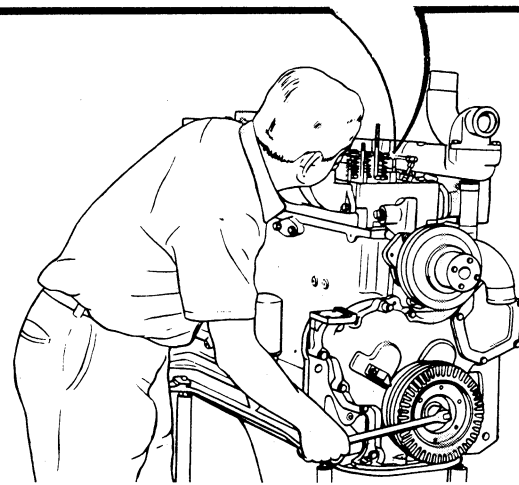
STEP 10



INSTALL DIAL INDICATOR ON END OF VALVE STEM WITH VALVE RESTING ON TOP OF PISTON.

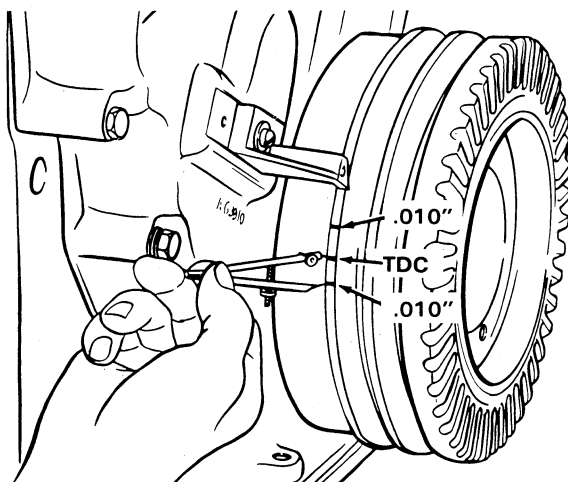


CRANK ENGINE CLOCKWISE UNTIL DIAL INDICATOR HAND STOPS MOVING. RESET INDICATOR TO ZERO.

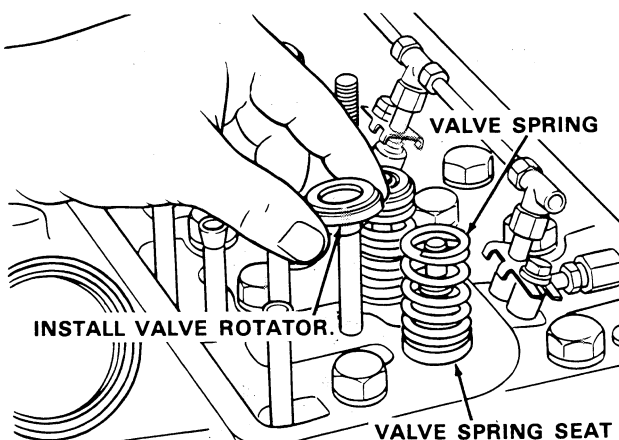
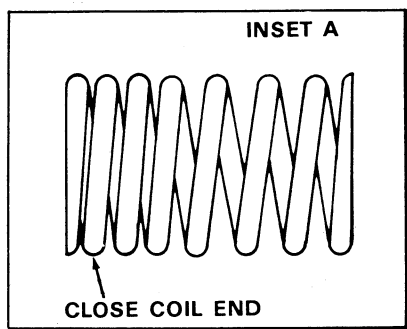


CRANK ENGINE CLOCKWISE UNTIL .010" SHOWS ON DIAL. SCRIBE A MARK ON CRANKSHAFT PULLEY IN LINE WITH TIMING POINTER.

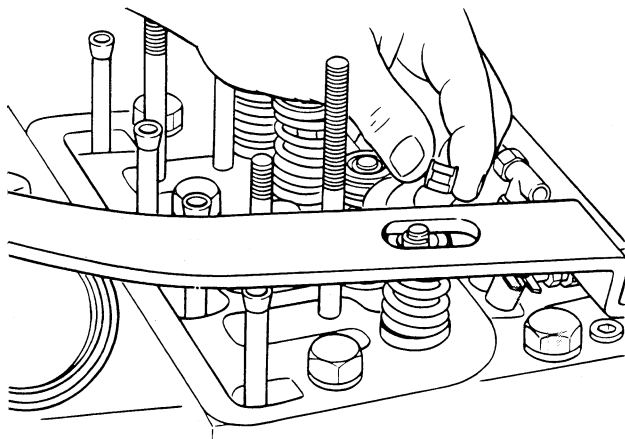
CRANK ENGINE COUNTERCLOCKWISE PAST ZERO MARK ON INDICATOR UNTIL .010" SHOWS ON DIAL. AGAIN, SCRIBE MARK ON CRANKSHAFT PULLEY.

STEP 11

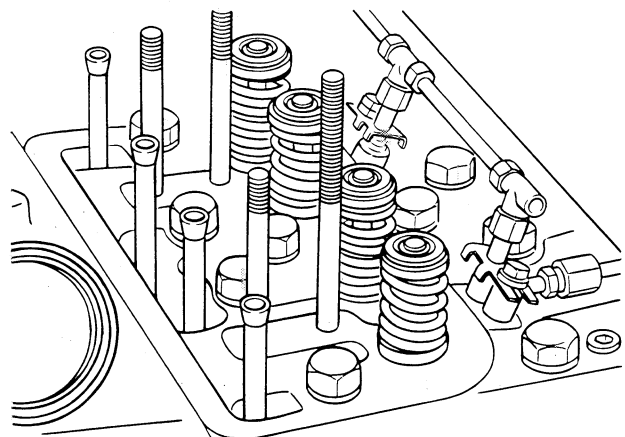
HALF THE DISTANCE BETWEEN THESE TWO SCRIBE MARKS ON CRANKSHAFT PULLEY WILL BE THE TOP DEAD CENTER (TDC) MARK. IF THE SCRIBE MARKS ARE NOT THE SAME AS ORIGINAL MARKS ON PULLEY CHECK DAMPER.

STEP 12

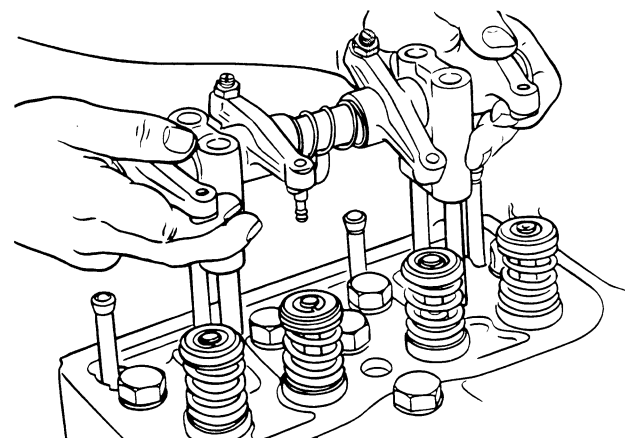
INSTALL SPRING SEAT AND VALVE SPRING. **NOTE:** IF EQUIPPED WITH VALVE SPRING HAVING ONLY ONE CLOSE COIL END, PLACE THIS END TOWARD CYLINDER HEAD, SEE INSET A.

STEP 13

COMPRESS VALVE SPRING USING FABRICATED TOOL. INSTALL SEAL IN LOWER VALVE STEM GROOVE. INSTALL VALVE KEEPERS IN OUTER VALVE STEM GROOVE.

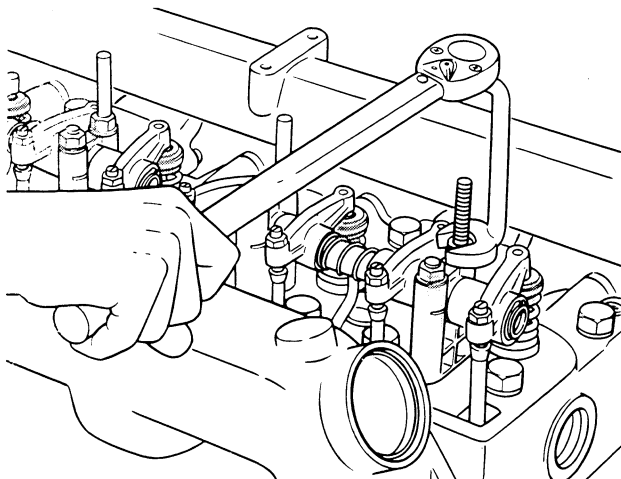
STEP 14

REMOVE SPRING COMPRESSING TOOL. TAP END OF VALVE STEM TO SEAT KEEPERS.

STEP 15

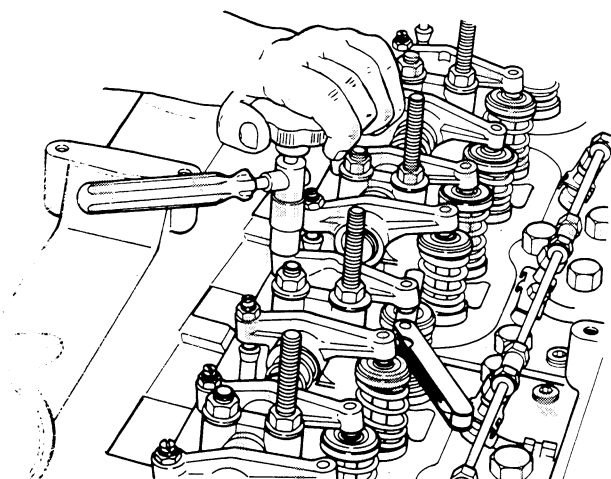
INSTALL ROCKER ARM ASSEMBLY ONTO CYLINDER HEAD.

STEP 16



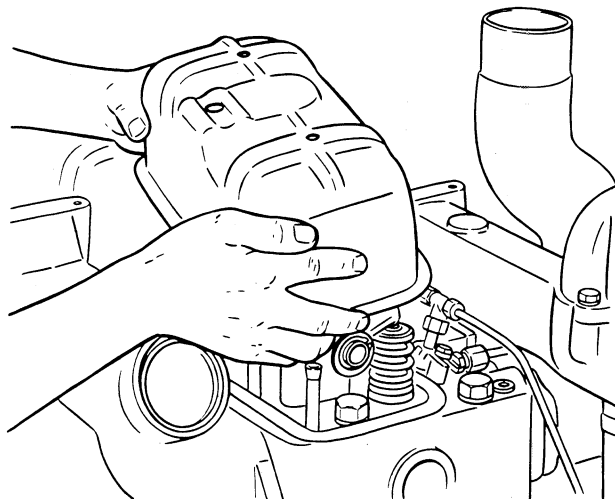
**TORQUE ROCKER ARM ASSEMBLY RETAINING NUTS
40 TO 45 FT. LBS.**

STEP 17



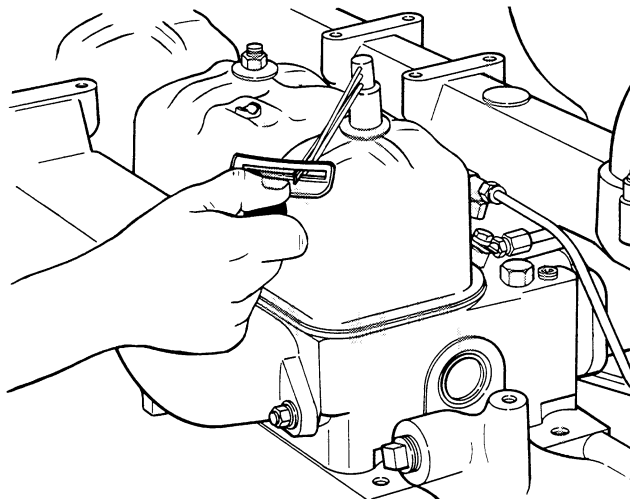
**ADJUST VALVE TAPPETS. REFER TO STEP 26
FOR COLD SETTING OR TO STEP 33 FOR HOT
SETTING.**

STEP 18



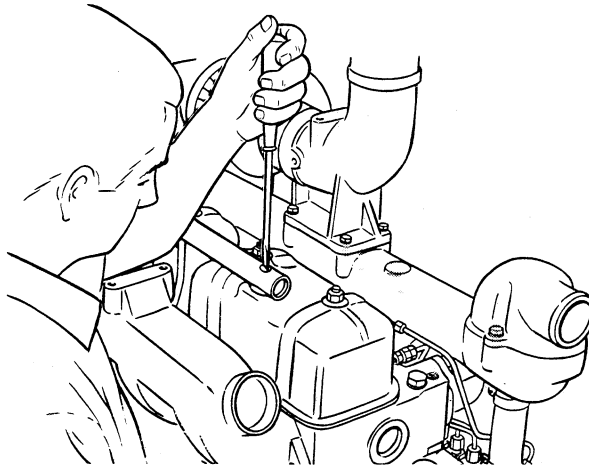
INSTALL VALVE COVERS AND GASKETS.

STEP 19



TORQUE VALVE COVER NUTS 60 TO 70 IN. LBS.

STEP 20

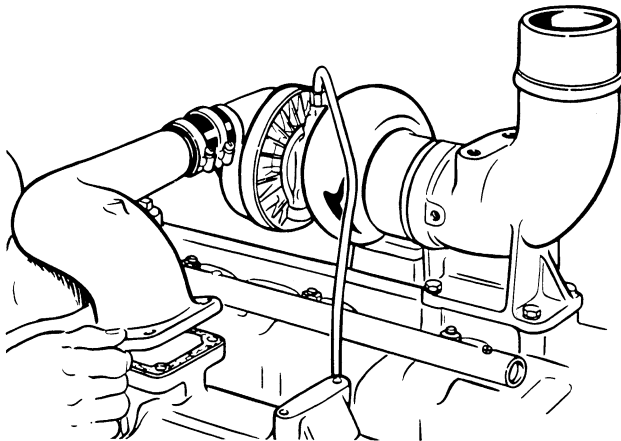


INSTALL BREATHER TUBE AND GASKETS.

Adjusting Tappets

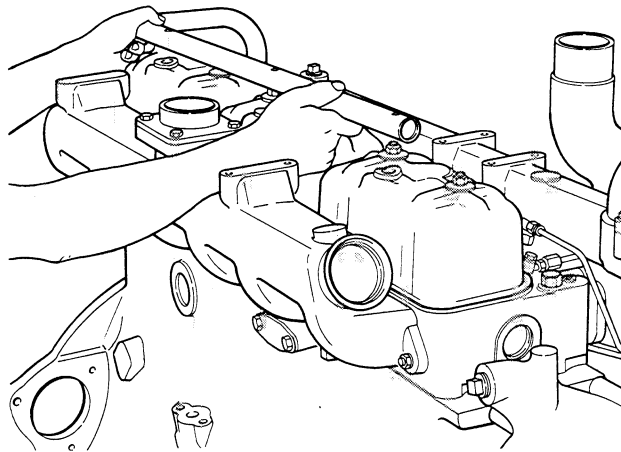
Cold Setting

STEP 21



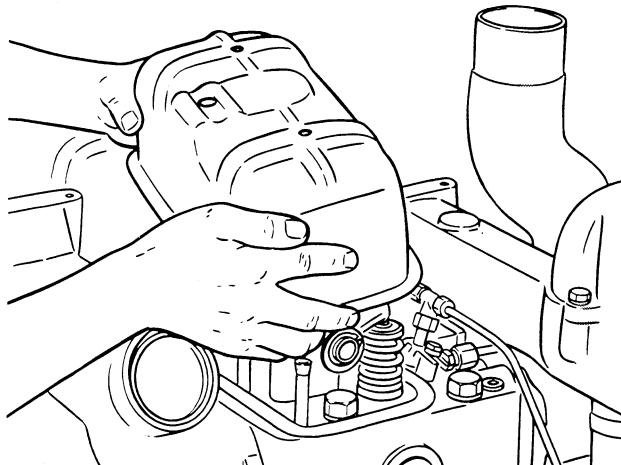
REMOVE TURBOCHARGER INTAKE ELBOW (IF SO EQUIPPED).

STEP 22



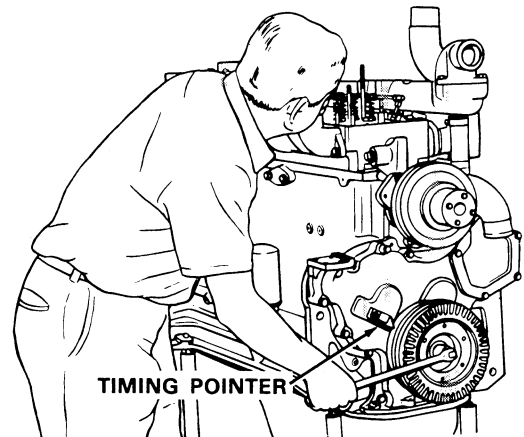
REMOVE BREATHER TUBE.

STEP 23



REMOVE VALVE COVERS AND GASKETS FROM ALL CYLINDERS.

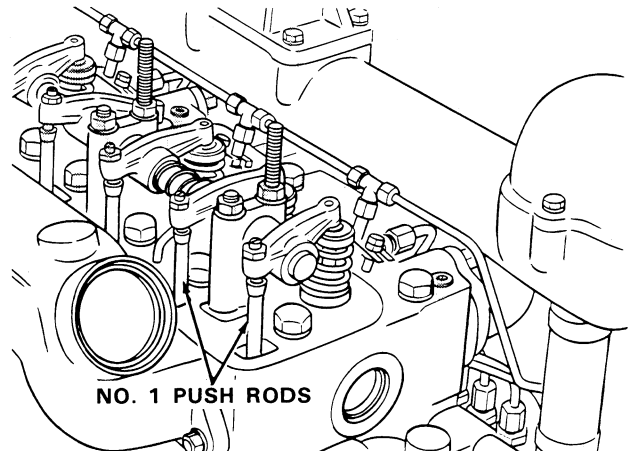
STEP 24



TIMING POINTER

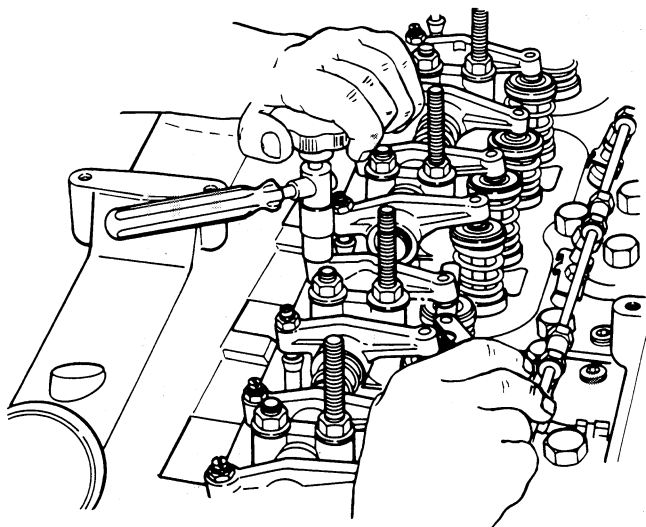
CRANK ENGINE UNTIL TIMING POINTER IS ALIGNED WITH TDC TIMING MARK ON CRANKSHAFT PULLEY.

STEP 25



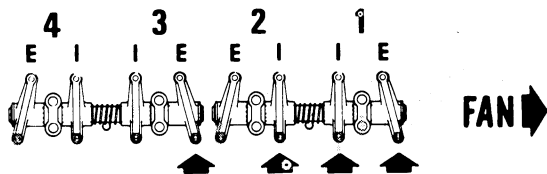
NO. 1 PUSH RODS

CHECK PUSH RODS ON NO. 1 CYLINDER FOR LOOSENESS. IF PUSH RODS ARE LOOSE, NO. 1 CYLINDER IS AT TDC ON THE COMPRESSION STROKE. IF PUSH RODS ARE TIGHT, CRANK ENGINE ONE COMPLETE REVOLUTION AND ALIGN TIMING POINTER WITH TDC MARK ON PULLEY.

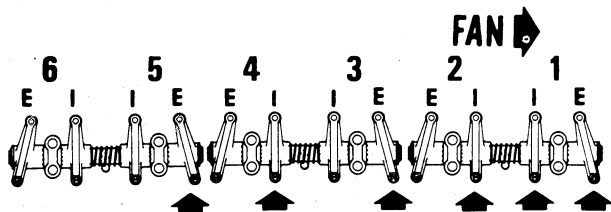
STEP 26

CHECK AND ADJUST THE INTAKE AND EXHAUST VALVES AS POINTED OUT BY THE ARROWS BELOW.

TAPPET CLEARANCE COLD - INTAKE VALVES .015"
EXHAUST VALVES - .025"

FOUR CYLINDER ENGINES

NO. 1 TDC COMPRESSION STROKE

SIX CYLINDER ENGINES

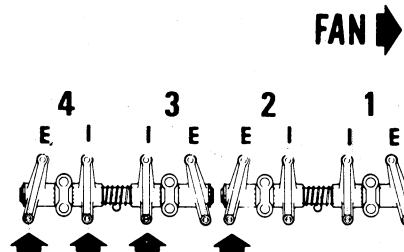
NO. 1 TDC COMPRESSION STROKE

STEP 27

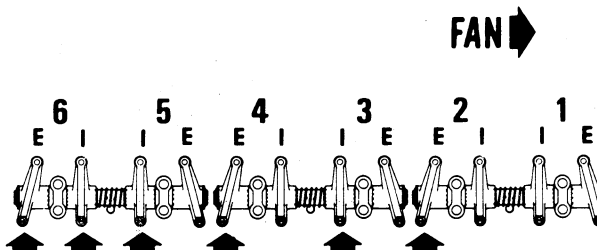
CRANK THE ENGINE ONE COMPLETE REVOLUTION AND ALIGN THE TIMING POINTER WITH THE TDC MARK ON CRANKSHAFT PULLEY.

CHECK AND ADJUST THE INTAKE AND EXHAUST VALVES AS POINTED OUT BY THE ARROWS BELOW.

TAPPET CLEARANCE COLD - INTAKE VALVES .015"
EXHAUST VALVES .025"

FOUR CYLINDER ENGINES

NO. 4 TDC COMPRESSION STROKE

SIX CYLINDER ENGINES

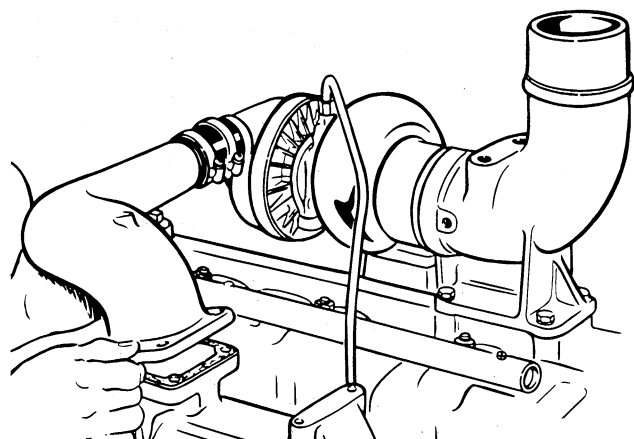
NO. 6 TDC COMPRESSION STROKE

NOTE: AFTER COMPLETING COLD SETTING VALVE TAPPET ADJUSTMENT PROCEED TO STEP 35.

Adjusting Tappets

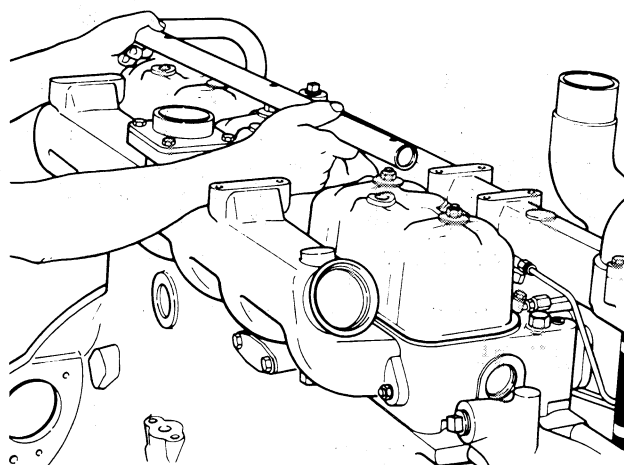
Hot Setting with Engine Stopped

STEP 28



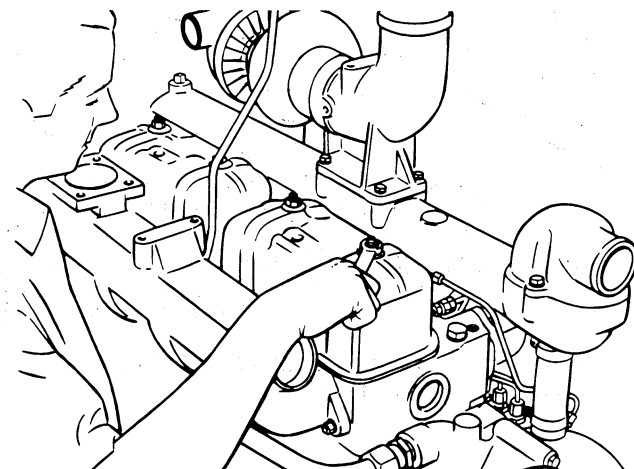
REMOVE TURBOCHARGER INTAKE ELBOW (IF SO EQUIPPED).

STEP 29



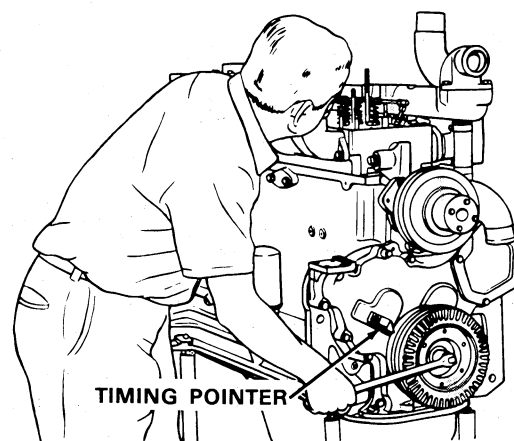
REMOVE BREATHER TUBE

STEP 30



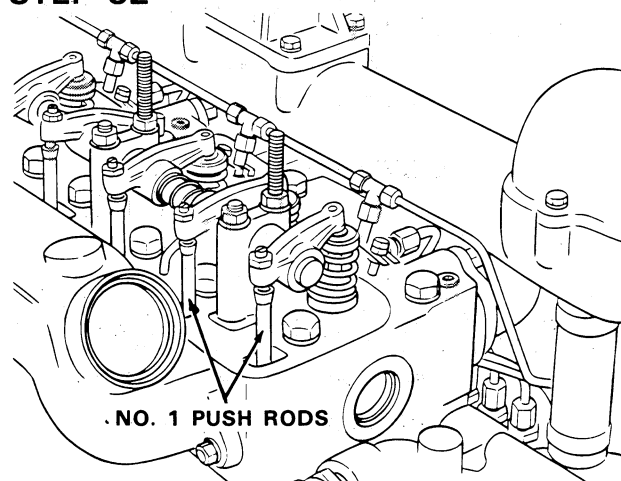
REMOVE VALVE COVERS AND GASKETS FROM ALL CYLINDERS.

STEP 31



CRANK ENGINE UNTIL TIMING POINTER IS ALIGNED WITH TDC TIMING MARK ON CRANKSHAFT PULLEY.

STEP 32



NO. 1 PUSH RODS

CHECK PUSH RODS ON NO. 1 CYLINDER FOR LOOSENESS. IF PUSH RODS ARE LOOSE, NO. 1 CYLINDER IS AT TDC ON THE COMPRESSION STROKE. IF PUSH RODS ARE TIGHT, CRANK ENGINE ONE COMPLETE REVOLUTION AND ALIGN TIMING POINTER WITH TDC MARK ON PULLEY.

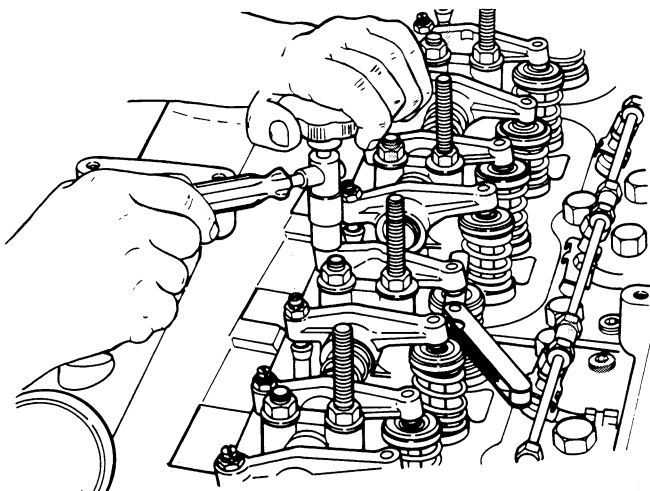


Suggest:

If the above button click is invalid.

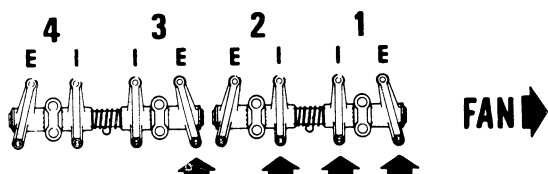
Please download this document first, and then click the above link to download the complete manual.

Thank you so much for reading

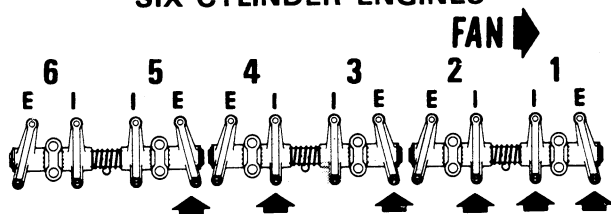
STEP 33

CHECK AND ADJUST THE INTAKE AND EXHAUST VALVES AS POINTED OUT BY THE ARROWS BELOW.

TAPPET CLEARANCE HOT - INTAKE VALVES .015"
EXHAUST VALVES .020"

FOUR CYLINDER ENGINES

NO. 1 TDC COMPRESSION STROKE

SIX CYLINDER ENGINES

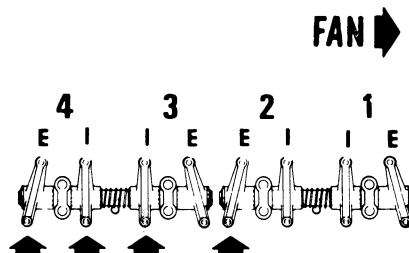
NO. 1 TDC COMPRESSION STROKE

STEP 34

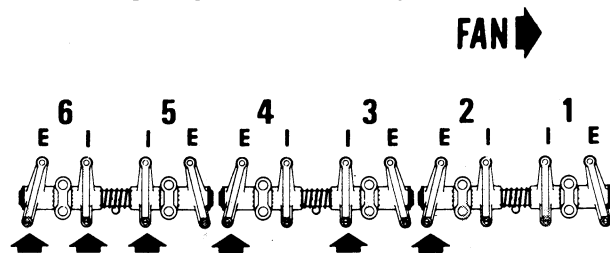
CRANK THE ENGINE ONE COMPLETE REVOLUTION AND ALIGN THE TIMING POINTER WITH THE TDC MARK ON CRANKSHAFT PULLEY.

CHECK AND ADJUST THE INTAKE AND EXHAUST VALVES AS POINTED OUT BY THE ARROWS BELOW.

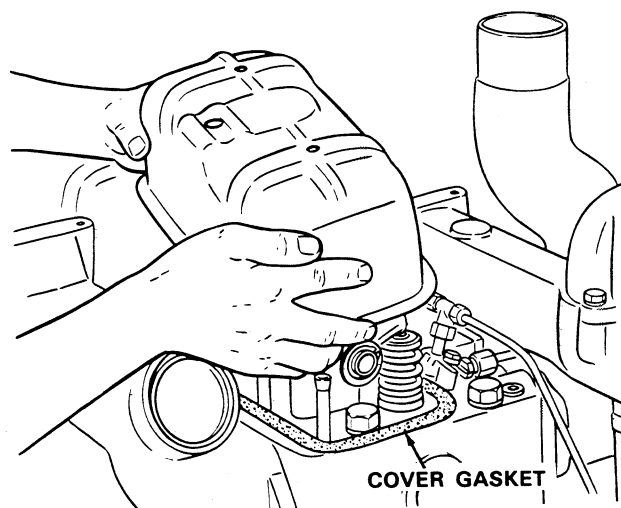
TAPPET CLEARANCE HOT - INTAKE VALVES .015"
EXHAUST VALVES .020"

FOUR CYLINDER ENGINES

NO. 4 TDC COMPRESSION STROKE

SIX CYLINDER ENGINES

NO. 6 TDC COMPRESSION STROKE

STEP 35

AFTER TAPPET ADJUSTMENT, INSTALL VALVE COVERS AND GASKETS.

<https://www.ebooklibonline.com>

Hello dear friend!

Thank you very much for reading.

Enter the link into your browser.

The full manual is available for immediate download.

<https://www.ebooklibonline.com>