

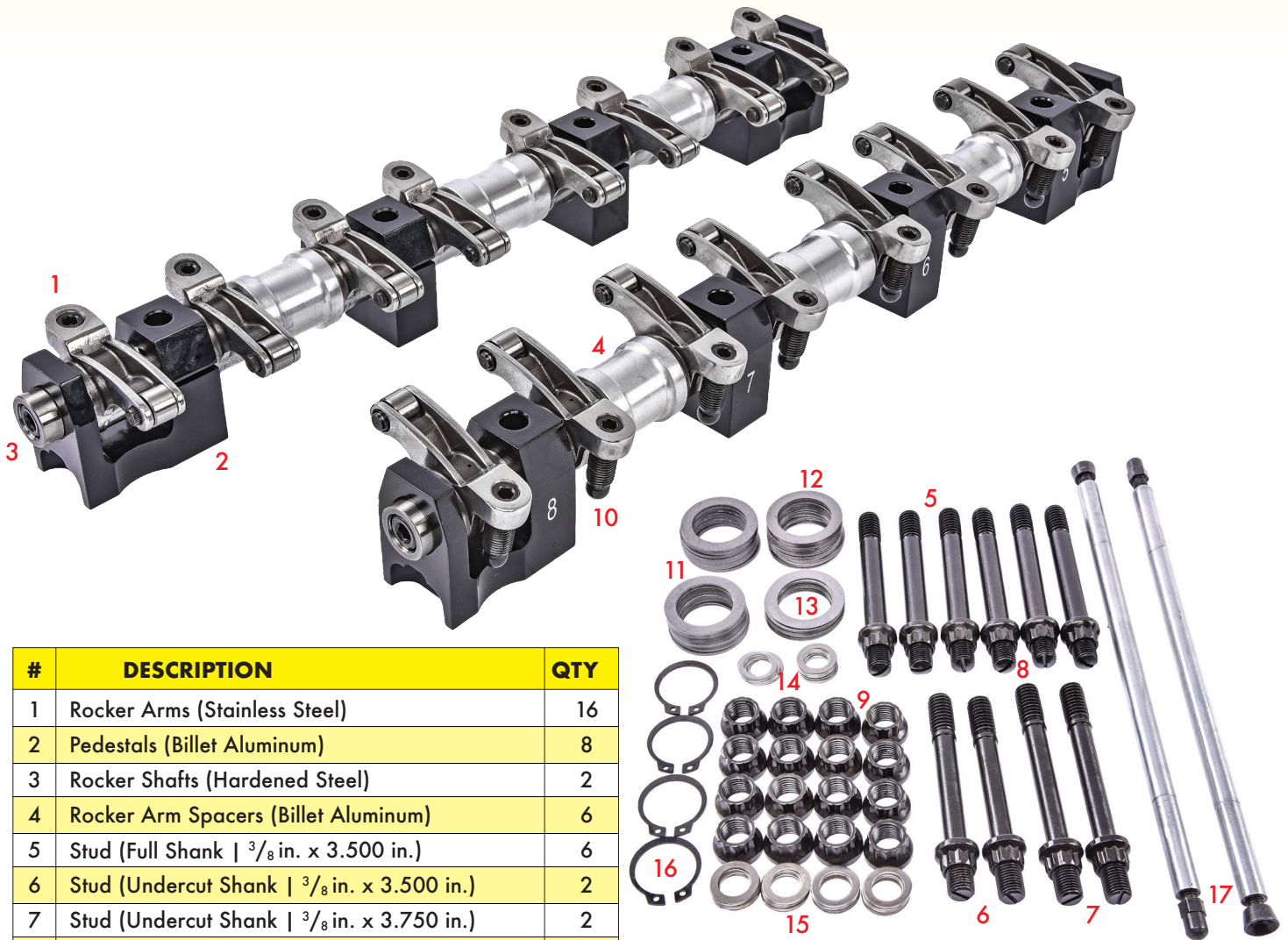
# Stainless Steel Rocker Arm Kit Installation Instructions

555-20928

1957-1976 Ford FE Engines (352 - 428 cu. in.)



# Parts List



#	DESCRIPTION	QTY
1	Rocker Arms (Stainless Steel)	16
2	Pedestals (Billet Aluminum)	8
3	Rocker Shafts (Hardened Steel)	2
4	Rocker Arm Spacers (Billet Aluminum)	6
5	Stud (Full Shank   3/8 in. x 3.500 in.)	6
6	Stud (Undercut Shank   3/8 in. x 3.500 in.)	2
7	Stud (Undercut Shank   3/8 in. x 3.750 in.)	2
8	Adjuster Flare Nuts (3/8-24   12 pt.)	10
9	Adjuster Flare Nuts (7/16-20   12 pt.)	16
10	Valve Lash Adjusters (7/16-20   Ball-Type)	16
11	Shims (0.060 in. x 0.870 in.)	16
12	Shims (0.028 in. x 0.870 in.)	16
13	Shims (0.016 in. x 0.870 in.)	16
14	Adjuster Washers (Stainless Steel)	16
15	Rocker Stand Washers (Stainless Steel)	8
16	Retainers (Spring Steel)	4
17	Push Rod Length Checker	2

# Introduction

We would like to take this opportunity to thank you for purchasing this JEGS Stainless Steel Rocker Arm Kit. We welcome any comments or feedback you might have. If you have any questions about our products or about the installation procedure, please feel free to contact us at 1.800.345.4545.

## Before Installation

- Read all the instructions thoroughly before beginning the installation. If you do not feel that you have the mechanical aptitude to complete the job in a safe manner, JEGS strongly recommends that you employ the services of a knowledgeable technician to perform the installation.
- Use the parts list on pg.1 to verify that you have received all the components.
- Included in the kit are eight billet aluminum rocker stands. These stands are numbered to match the corresponding cylinder. Cylinders 1, 2, 3, & 4 are on the passenger side, while cylinders 5, 6, 7, & 8 are on the driver side. The rocker arm kit comes pre-assembled with the stands, spacers, rocker arms, and shafts. The retainers must be installed to secure the assembly.
- JEGS is not responsible for applications that are outside the normal and intended use of our products including specific model and year applications.

### Note

This rocker arm kit is intended for high-performance and racing applications. In these situations the valvetrain oil volume will be increased. Both OE and aftermarket cylinder heads may require the use of restrictors on the port 3 and 6 oil passages. These restrictors are located near the base of the studs. Typically the ID is reduced to between 0.060-0.090 in. When using a high pressure/high volume oil pump this reduction in size is highly suggested.

This information is a guide Consult your engine builder for the exact specifications.

# Installation

1. 3 hours prior to installation, immerse the rocker arm roller tips in oil. Doing this allows the roller tips and axles to achieve full penetration.
  - NOTE: Pre-oiling is essential to prevent premature wear at the initial startup.
2. Inspect the cylinder heads for damage and wear that might prevent the rocker stands from bolting into place.
3. Verify that the rocker stand studs can be easily inserted into the cylinder head to operational depth. If there is any difficulty, use a tap to clean the threads.
4. Temporarily install the rocker stand studs into the cylinder head with finger-tight pressure. Verify the rocker arm alignment and push rod length on each head.
  - 5 mounting studs per cylinder head are included, only 4 are necessary.
    - 6 Full shank studs
      - For intake ports: 1, 2, 4, 5, 7, & 8
    - 2 Undercut shank studs (3.500 in. Length)
      - These are tapered to allow for oil flow.
      - Aftermarket cylinder head application.
        - Most aftermarket application use the same length studs for entire rocker assembly.
      - For intake ports: 3 & 6
    - 2 Undercut shank studs (3.750 in. Length)
      - These are tapered to allow for oil flow.
      - OEM cylinder head application.
      - For intake ports: 3 & 6

### Note

Intake ports 3 and 6 must use undercut shank studs. These ports are responsible for oil flow and lubrication of the rocker assembly. Failure to use the correct studs will result in severe engine damage. JEGS is not responsible for improper installation of this kit.

5. If the rocker arms are out of alignment you will have to disassemble the rocker assembly and add or remove shims to achieve the proper fitment. See the Modification section on pg.3 for details on reassembling your rocker arm assembly.

## Instruction

6. If the push rod length has not been confirmed see the Modification section on pg.3-4 for details.
7. Securely install the rocker stand studs using a removable strength thread locker on the cylinder head side threads. Using the slotted head, fully insert the studs until they are hand tight. Heavy torque is not necessary with the thread locker. Double check that the undercut shank studs are installed on intake ports 3 and 6. If necessary, oil restrictors should be installed at this point.
8. Verify that the rocker shaft oil holes are facing toward the cylinder head. Double check the alignment of the roller tip to the valve stem. Confirm that you have at least 0.005 in. clearance between the rockers, stands, and spacers. Install or remove shims as necessary.
9. Lightly apply assembly lube to both ends of the push rods. Insert the push rods into the lifter bores making sure they are fully seated in the lifter body.
10. Install the rocker assembly onto the cylinder head. Carefully hand turn the push rod adjuster making sure that the adjuster ball is properly seated in the push rod cup. With the rocker arm assembly in place, install the stud washers and nuts using moly lube. Apply pressure to the valve springs while tightening the nuts evenly. Once secured, torque the nuts to 35 lbs./ft. with moly lube, 40-45 lbs./ft. with motor oil.
11. Set valve lash to camshaft manufacturer specs.

### Note

Before starting the engine check for any interference between the rocker arms, push rods, and valve springs through the entire combustion cycle.

If an interference is found, resolve before starting.

Prime the oil pump to ensure that oil is flowing through the entire rocker arm assembly.

## Modifications

### Rocker Arm Assembly

Proper assembly

1. When installing the rocker shafts verify that the oil-feel holes are facing toward the cylinder head. This is essential for proper lubrication
2. Assembly from one end to the other (rear to front). Coat the bushing surfaces with assembly lube.
3. Install the first rocker arm between the end most double stand with the pedestal number facing the intake manifold. The double stands on cylinders 1, 4, 5, & 8 require a retaining clip secure the rocker assembly on the shaft. Single stands on cylinders 2, 3, 6, & 7 do not use a retaining clip.
4. Both aftermarket and OE cylinder heads require the use of shims in the rocker assembly to align the rocker arms to the valve stems. To get the correct spacing several trial installations may be necessary. A clearance of 0.015 - 0.020 in. must be maintained between the rocker arm and pedestal/spacer. Shims of different thickness are included in this kit to aid in achieving proper alignment.

### Push Rod

Determining proper length and size

1. Set cylinder #1 to Top Dead Center (TDC)
2. Install the push rod length checker tool into the intake and exhaust lifters
  - It is necessary to check both the intake and exhaust camshaft profiles for correct length.
3. With the push rod checker in place, set the valve lifter on the camshaft base circle and the valve lash adjuster rotated clockwise with 6 - 7 threads exposed from the base of the rocker body over the number one cylinder. The OEM push rod length is 9.225 in. A push rod length longer than 9.250 in. should not be required for a Ford FE engine build. Using that length as a guide, tighten and extend the valve lash adjuster accordingly until you achieve the desired rocker arm geometry and push rod alignment.

## Modification

4. Install the rocker arm assembly on the cylinder head. Secure with washers and nuts; tighten until snug.
5. Begin adjusting the push rod length checkers until reaching the required fitment and length.
6. Remove rocker assembly, and push rod length checkers. Measure the checker's lengths and order the correct push rods, if longer or shorter than stock.

### Note

The maximum recommended spring pressure for this rocker arm kit is 275 lbs.

The rocker arms in this kit will clear up to a 1.500 in. diameter valve spring.

4130 chromoly steel push rods are required. Ford FE engines require  $\frac{3}{8}$  in. cup-style push rods to match the kit's adjuster balls.

### Note

Ford FE push rods are  $\frac{3}{8}$  in. diameter. This kit comes with  $\frac{3}{8}$  in. diameter push rod checkers. If you use a  $\frac{5}{16}$  in. diameter push rod checker you may have clearance issues with the rocker body. Any contact between the rocker arm and push rod will result in a broken rocker arm.

#### Torque Specifications with Oil

Part	Lbs./Ft.
Rocker Stand Studs ( $\frac{3}{8}$ in.)	20 (Hand)
Rocker Stand Flare Nuts ( $\frac{3}{8}$ in.)	40-45
Adjuster Flare Nuts (12-point   $\frac{7}{16}$ in.)	22-25

## Post-Installation

1. Check and re-torque mounting stud nuts.
2. Verify valve lash, reset as necessary. Torque adjuster nuts to 25 lbs.ft.
  - Severe engine damage may occur if an adjuster nut comes loose while the engine is running.
3. Check oil flow for obstruction

## Warnings

1. Use undercut shank stud for cylinders 3 & 6 to maintain oil flow.
2. Do not loosen stud nuts with the springs under load.
3. Do not over-tighten valve lash adjuster nuts.
4. The valve lash adjusters must maintain a minimum of two threads from the seated position.
5. Do not run engine without proper lubrication.
6. Do not use push rods with damaged ends
7. Do not allow the push rod to make contact with the cylinder head.

