CORVETTE C05/C06 MINI MANTIS ANGLE KIT

*Always use certified licensed technician/s for installation

Introduction:

- This kit will fit the Corvette C05/C06.
- This angle kit is designed to increase the steering angle of the front wheels, allowing for greater angle during drifting. It also improves the kinematics of the suspension and is optimized for drifting.
- Tools and equipment required for installation:

  Floor Jack, Jack Stands, Wrenches, Sockets, Plier, Torque Wrench, Thread Locker

Step 1: Preparation

- Ensure the car is parked on a level surface and the wheels are chocked to prevent accidental movement during installation.
- Safety First - Disconnect the negative terminal of the battery to avoid any electrical accidents while working on the car. In addition to choking the wheels and disconnecting the battery, it is essential to wear appropriate safety gear and clothing, including closed-toe shoes, long sleeves and safety glasses.
- Lift the car using a jack or hoist making sure to position it securely under the recommended lifting points. Then, place the jack stands for additional support before beginning any work. Double-check that the car is stable and won't shift while you work.

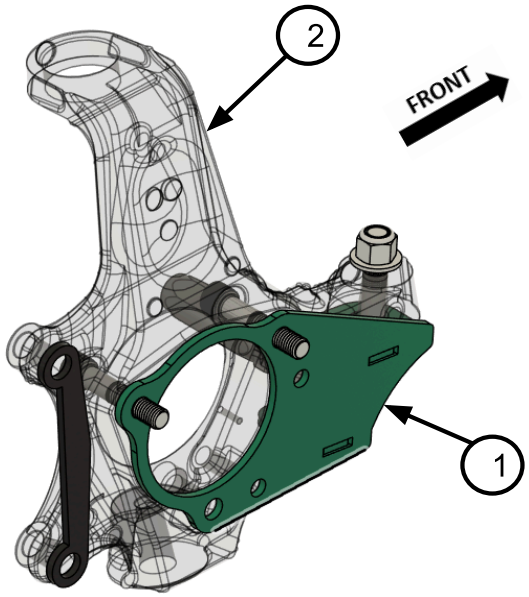
Step 2: Front Suspension removal

- Remove the wheels, brakes, and any components obstructing access to the front suspension.
- Unbolt the factory suspension components, such as factory tie rods and arms. Be cautious not to damage any surrounding parts during this process.

Step 3: Angle Kit Installation

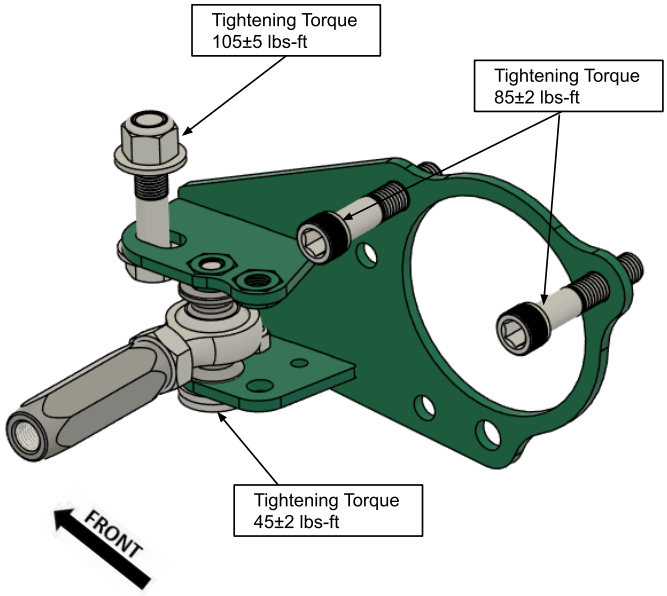
Fully assembled view of FDF Mini Mantis Angle Kit for Corvette C5/C6 is shown for the Right-hand side of the car.

1. RH Side Knuckle Adaptor Assembly.
2. RH Side OEM/Factory Knuckle.

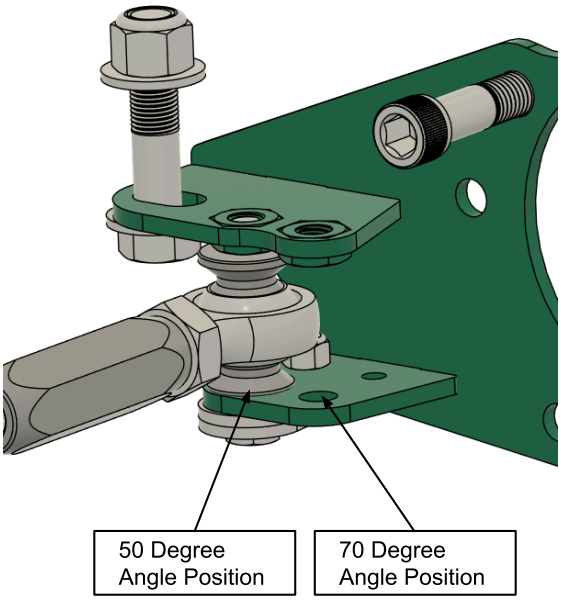


1. Installing the Knuckle Adapter

FDF Mini Mantis Knuckle Adapter for Corvette C5/C6 is different for the Left-hand and Right-hand side of the car. The Knuckle Adapter shown in the image is for the Right-hand side of the car.



- Make sure all the bolts are torqued properly.
- **PLEASE NOTE;** A small amount of grinding on the knuckle may be required to ensure proper fitment.
- **For 50 Degree Angle Position;** It is recommended to use with OEM Control Arms and Ackerman will be near 0 Degrees.
- **For 70 Degree Angle Position;** It is recommended to use aftermarket arms such as FDF Upper and Lower Control Arms and Ackerman will be 0 Degree at full lock.



Step 4: Reassembly

Double-check all connections and fastenings for any loose or improperly secured components.
Pay attention to every bolt and nut to prevent any potential issues during drifting.
Reinstall the wheels and brakes. Ensure brake lines are of sufficient length while turning wheels both sides lock to lock (no tension or potential breaking).
Lower the car back to the ground.

Step 5: Alignment and Adjustment

Recommended Alignment Specifications: -

1. **OEM Arms:**
   - Caster +6.0° to +7.0°
   - Toe 0 to 1/8th out
   - Wheel size recommendation 18 x 9 +15 offset
2. **Aftermarket Arms:**
   - Caster +6.0° to +7.0°
   - Camber -3.5° to -4.0°
   - Toe 0 to 1/8th out
   - Wheel size recommendation 18 x 9 +15 offset

These are only the recommended alignment specs. You can set up based upon individual preference.

- Do not exceed the Heim joint adjustments. Each Heim joint should have a minimum of 1 to 1.5 times the diameter of the Heim joint. (For Example: a ¾" Heim joint needs to have approx. ¾" to 1 1/8" thread engagement inside the arm, this is 12-18 threads)
- After installing the angle kit, it is crucial to get a professional alignment at a specialized shop that understands drifting setups. They will align the car to optimal angles for drifting and ensure the best possible handling and response.
- Additionally, adjustments to the angle kit components might be necessary to fine-tune the car's steering and suspension to your preferred drifting style. Make these adjustments as needed while considering safety and performance.

Step 6: Test Drive

- Before fully utilizing the drift car, take it for a test drive in a safe area to assess how it responds to the angle kit installation. Pay attention to any issues, unusual noises, that may require further adjustments.
- Take notes of any issues and adjustments needed during the test drive. Address these concerns before engaging in more aggressive drifting maneuvers.

Conclusion:

Recap the installation process and emphasize the importance of professional alignment after installing an angle kit. Always remember to prioritize safety during any car modifications and always use certified licensed technicians for your installations. Bolt checks regularly, recommendation is before each racing event.

Thank you for choosing the FDF angle kit to enhance your drifting experience.

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