SETTING TRUE TDC:

1. Attach the degree wheel. (This measures the amount of degrees of the crank rotation.)

2. Insert dial indicator into #1 spark plug hole. (This measures piston position when setting true TDC/ Top Dead Center.)

3. 0 pointer on the degree wheel.

4. Turn degree wheel 0.050” before TDC/ Top Dead Center and note down the number BTDC/ Before Top Dead Center.

5. Turn degree wheel 0.050” after TDC/ Top Dead Center and note down the number ATDC/ After Top Dead Center.

6. Calculate the degree of your numbers and note if there are any imbalances in the amount. If any numbers are out, adjust the degree wheel pointer accordingly and repeat steps 4 and 5 to ensure the result is now correct.

DEGREE INTAKE CAMSHAFT:

1. Set up dial test indicator (DTI) onto intake bucket. (This can be a bit hard to place correctly due to space, so take your time.) *Make sure the DTI is straight up and down as it can cause a discrepancy with the results if it is angled.

2. Turn degree wheel until DTI is showing 1mm (0.040”) of lift and note down the number ATDC/ After Top Dead Center, which is the opening number.

3. Turn degree wheel up to peak lift, come back down to 1mm (0.040”) before the valve closes and note down the number ABDC/ After Bottom Dead Center which is the closing number.

INTAKE CAMSHAFT CALCULATIONS:
180°
+ opening degrees BTDC/ Before Top Dead Center
closing degrees ABDC/ After Bottom Dead Center
= Intake duration

/ intake duration by 2
- Opening degrees BTDC/ Before Top Dead Center
= Intake centerline

DEGREE EXHAUST CAMSHAFT:

1. Set up DTI onto exhaust bucket.

2. Turn degree wheel until DTI is showing 1mm (0.040”) of lift.

3. Count numbers up from BDC/ Bottom Dead Center (180°) to point on the degree wheel and note down the number BBDC, which is the opening number.

4. Go all the way to peak lift and back down to 1mm (0.040”) before closing and note down the number ATDC/ After Top Dead Center which is the closing number.

EXHAUST CAMSHAFT CALCULATIONS:
180°
Opening degrees BBDC/ Before Bottom Dead Center
Closing degrees ATDC/ After Top Dead Center
= Exhaust Duration
/ Exhaust duration by 2
Closing degrees ATDC/ After Top Dead Center
= Exhaust centerline