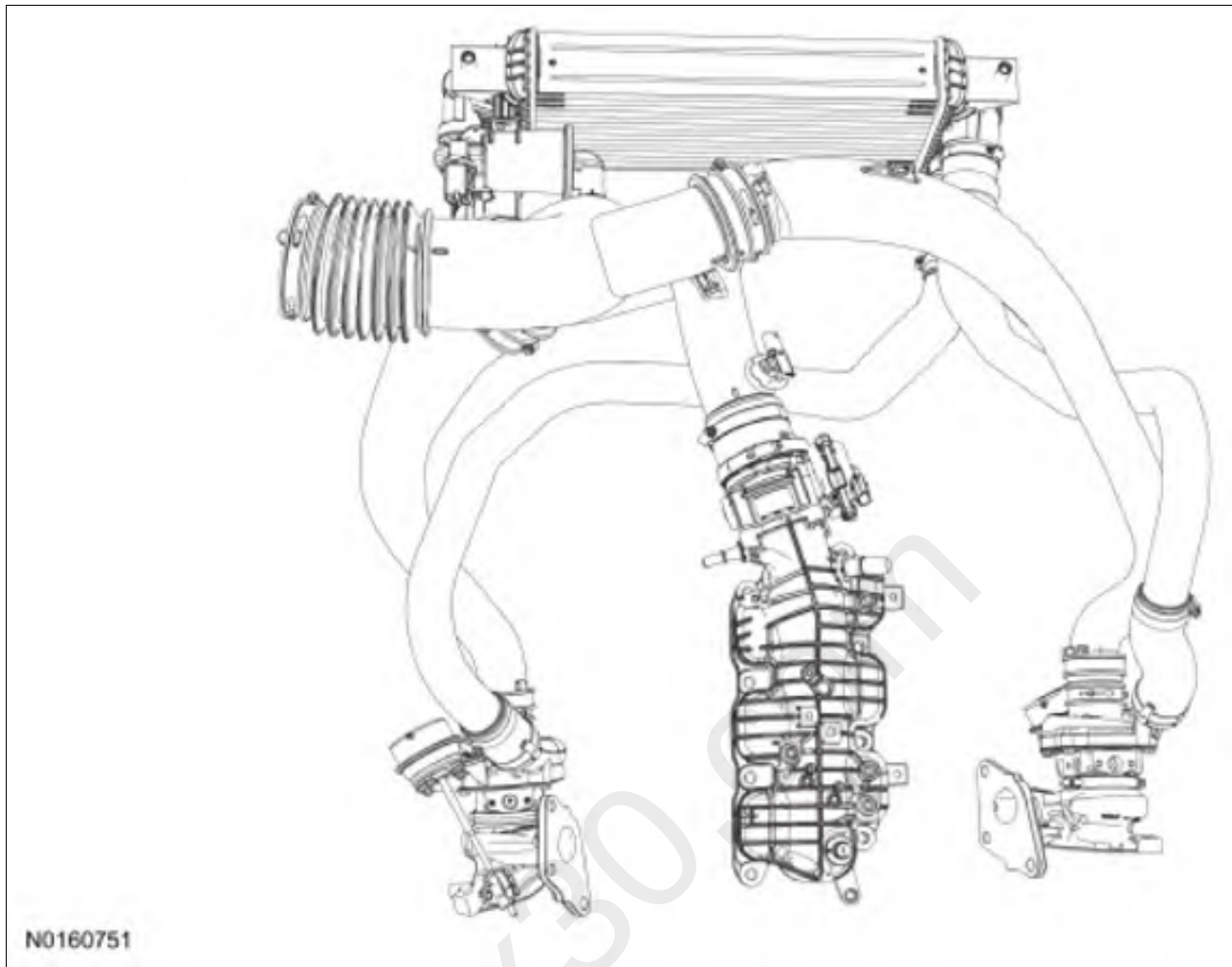


Fig 4: Identifying 6 Cylinder Turbocharger System - Air To Air Cooled (RWD And 4WD)

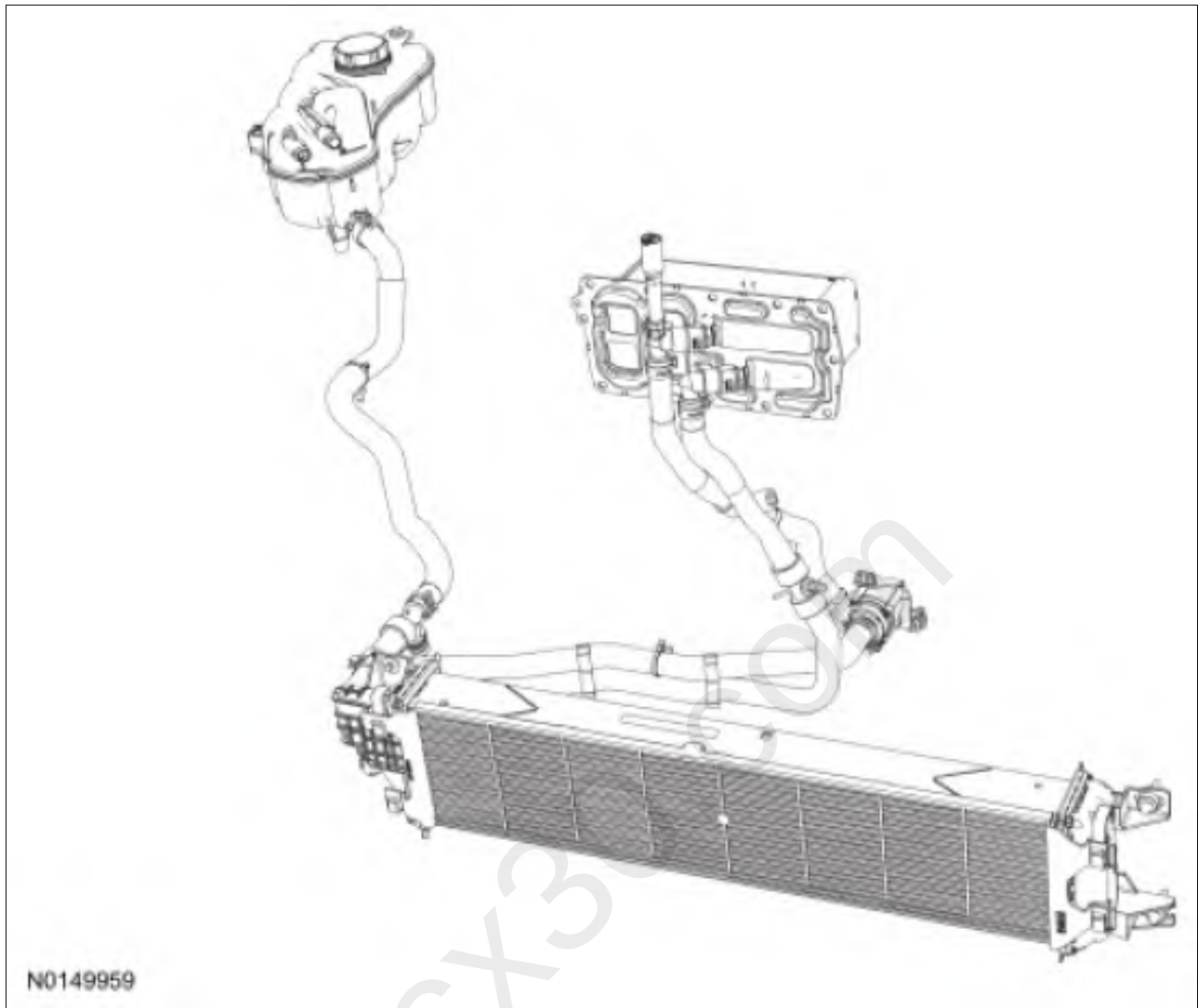


Courtesy of FORD MOTOR CO.

TURBOCHARGER AND CHARGE AIR COOLER (CAC) SYSTEMS > TURBOCHARGER SYSTEM > CHARGE AIR COOLER (CAC) SYSTEM - AIR TO LIQUID COOLED

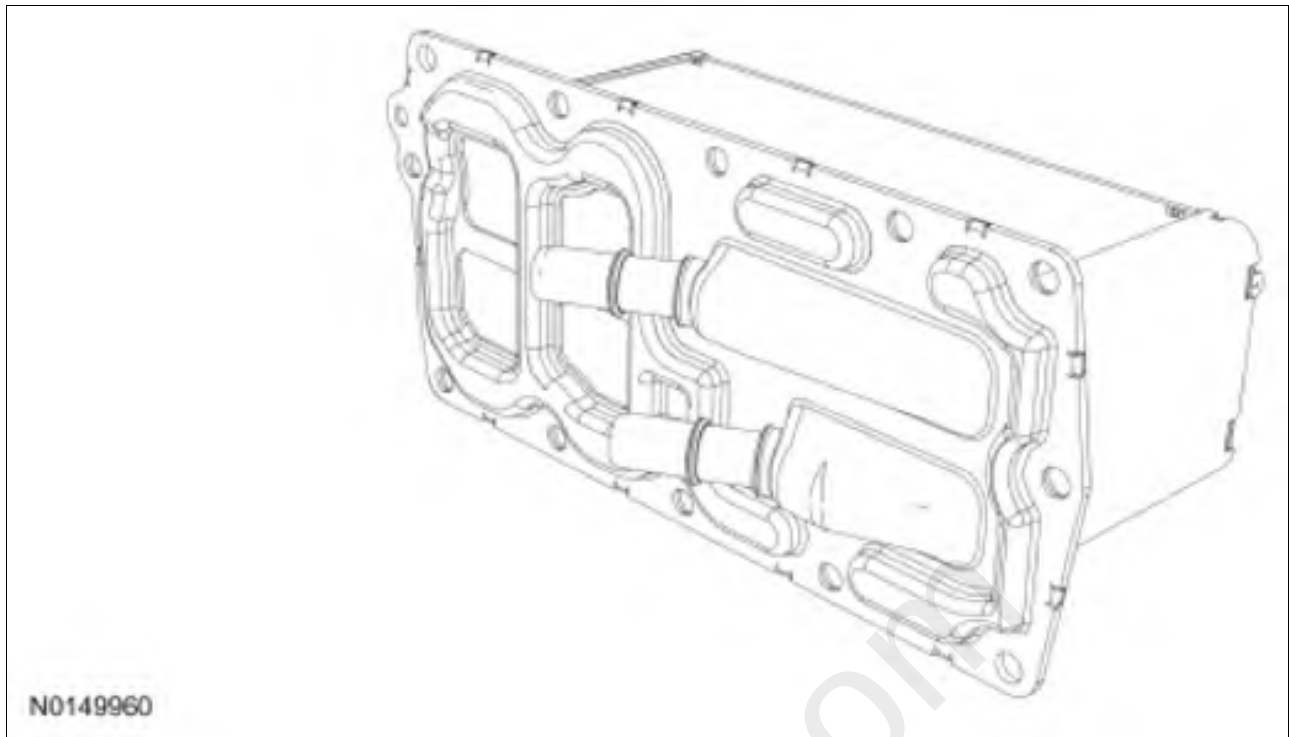
The CAC system cools the intake air which has been heated by the turbocharger. The removal of heat from the pressurized air going into the CAC increases the air density which improves combustion efficiency, engine horsepower, and torque. The system consists of an additional CAC radiator in the grille, a reservoir, an electric water pump, the CAC located in the intake manifold, and tubing to interconnect these components. The CAC is positioned after the turbocharger directly in the flow of the intake air. As the heated air flows through the CAC, heat is transferred to the coolant which is circulated back to the CAC radiator to be cooled by the airflow through the grille. The CAC pump is controlled by PCM. The PCM maintains a desirable intake air temperature by monitoring the CAC coolant temperature sensor in the CAC radiator.

Fig 1: Identifying CAC System - Air To Liquid Cooled



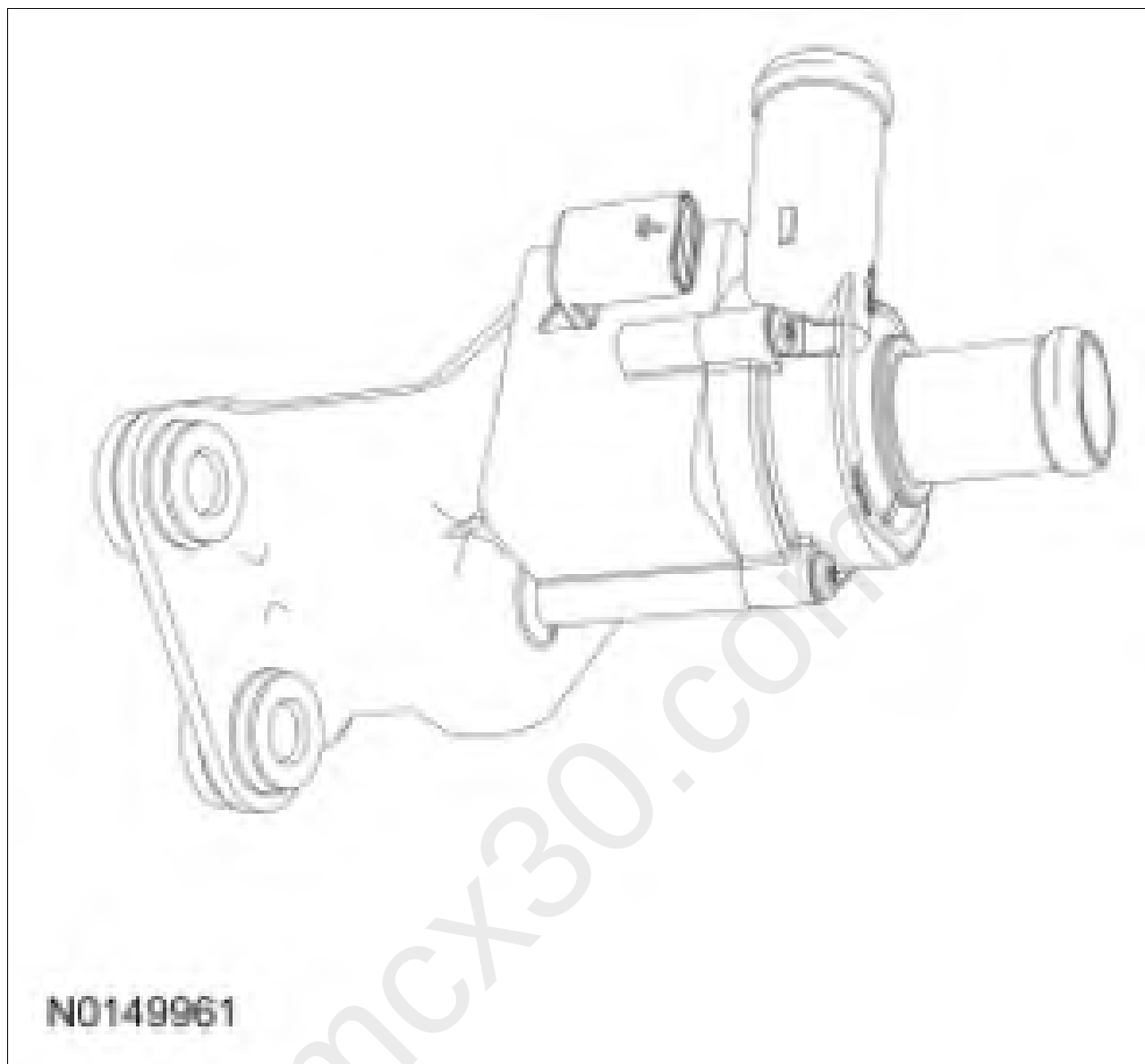
Courtesy of FORD MOTOR CO.

Fig 2: Identifying CAC - Air To Liquid Cooled



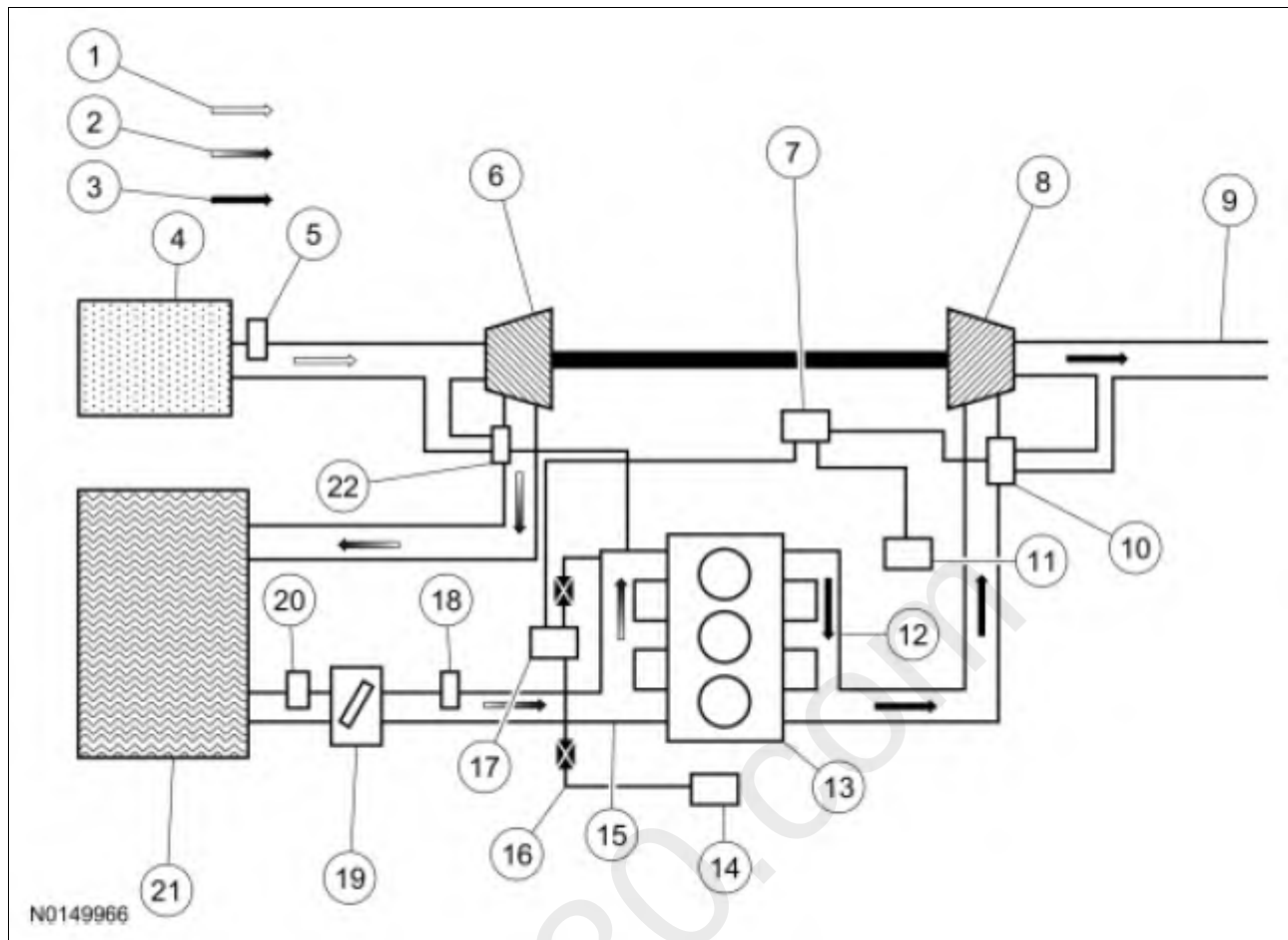
Courtesy of FORD MOTOR CO.

Fig 3: Identifying CAC Pump - Air To Liquid Cooled



Courtesy of FORD MOTOR CO.

Fig 4: 3 Cylinder Turbocharger Airflow Diagram - Vacuum Actuated Wastegate

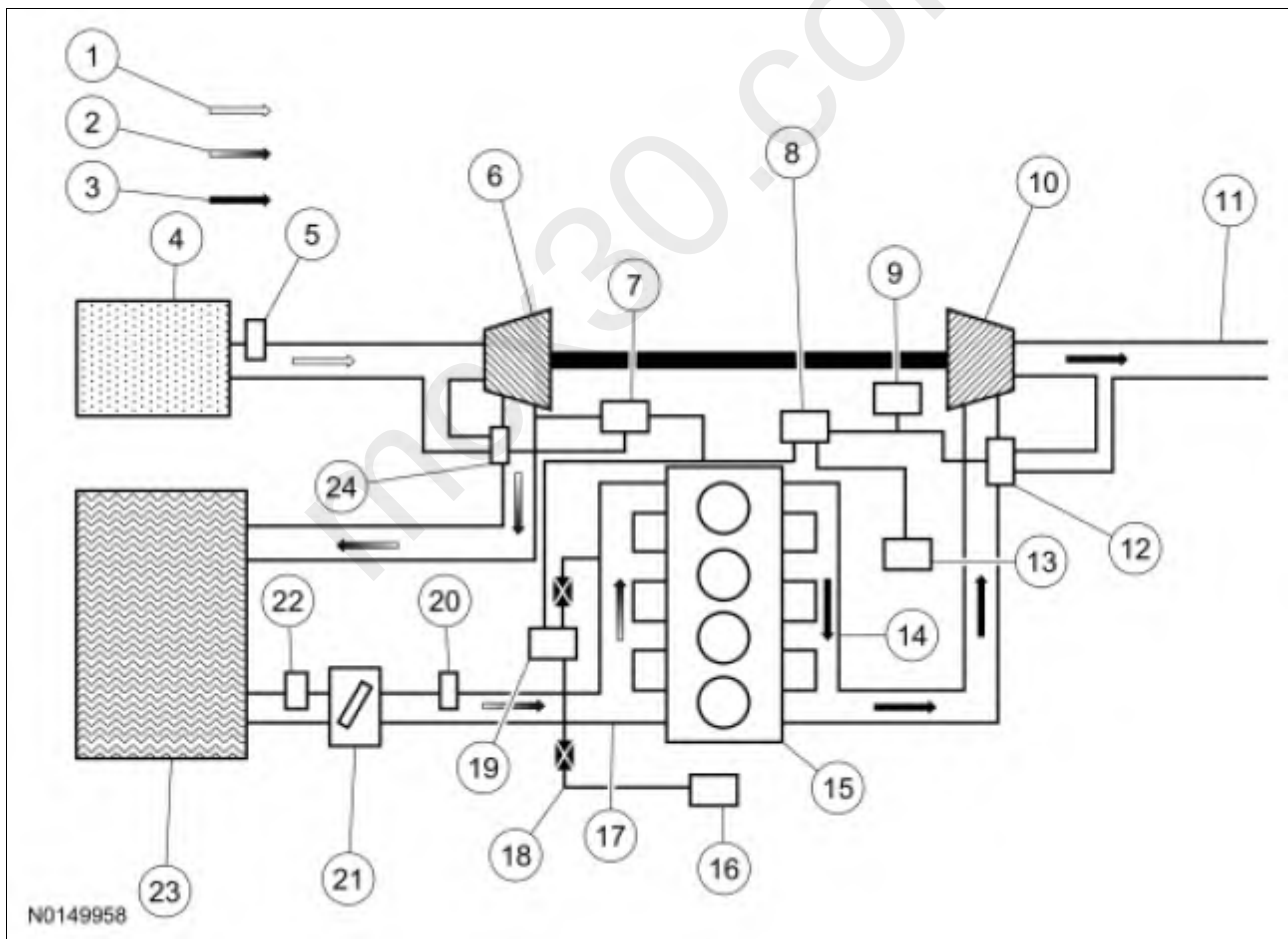


Courtesy of FORD MOTOR CO.

Turbocharger System	Component
1	Intake Air
2	Compressed Air
3	Exhaust Air
4	Air Filter
5	MAF/IAT Sensor
6	Turbocharger Intake Compressor
7	Turbocharger Wastegate Regulating Valve Solenoid
8	Turbocharger Exhaust Turbine
9	Outlet To Exhaust System
10	Turbocharger Wastegate
11	Turbocharger Wastegate Regulating Valve Solenoid Vent

12	Exhaust Manifold
13	Cylinder Head
14	Vacuum Pump
15	Intake Manifold
16	Vacuum Supply
17	Vacuum Reservoir
18	MAP Sensor
19	Intake Throttle Assembly
20	Turbocharger Boost Pressure/Charger Air Cooler Temperature (TCBP/CACT) Sensor
21	CAC
22	Turbocharger Bypass Valve

Fig 5: 4 Cylinder Turbocharger Airflow Diagram - Vacuum Actuated Wastegate

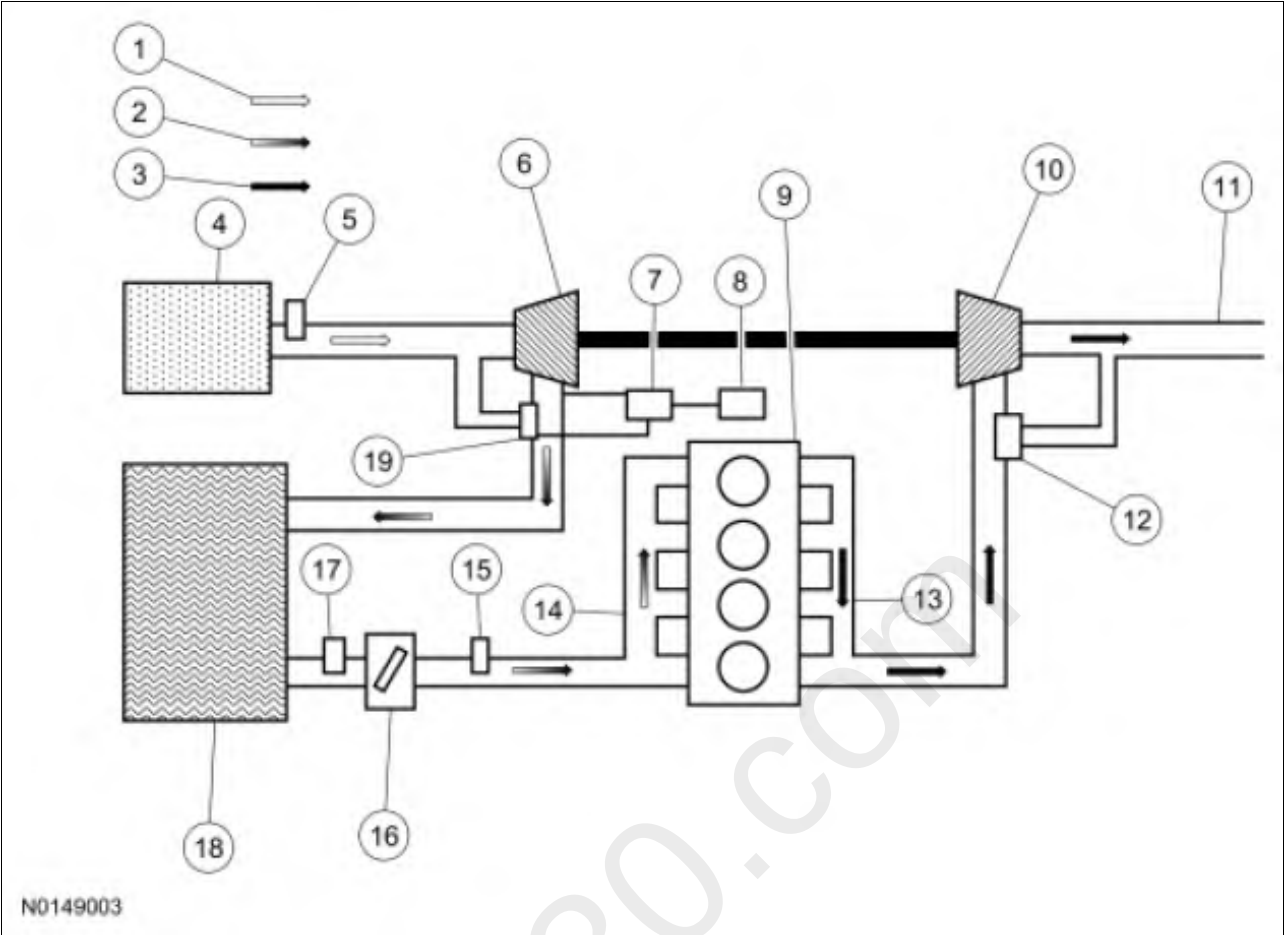


Courtesy of FORD MOTOR CO.

Turbocharger	Component
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System	
1	Intake Air
2	Compressed Air
3	Exhaust Air
4	Air Filter
5	IAT Sensor
6	Turbocharger Intake Compressor
7	Turbocharger Bypass Valve Solenoid
8	Turbocharger Wastegate Regulating Valve Solenoid
9	Wastegate Vacuum Sensor
10	Turbocharger Exhaust Turbine
11	Outlet To Exhaust System
12	Turbocharger Wastegate
13	Turbocharger Wastegate Regulating Valve Solenoid Vent
14	Exhaust Manifold
15	Cylinder Head
16	Vacuum Pump
17	Intake Manifold
18	Vacuum Supply
19	Vacuum Reservoir
20	MAP Sensor
21	Intake Throttle Assembly
22	Turbocharger Boost Pressure/Charger Air Cooler Temperature (TCBP/CACT) Sensor
23	CAC
24	Turbocharger Bypass Valve

Fig 6: 4 Cylinder Turbocharger Airflow Diagram - Pressure Actuated Wastegate

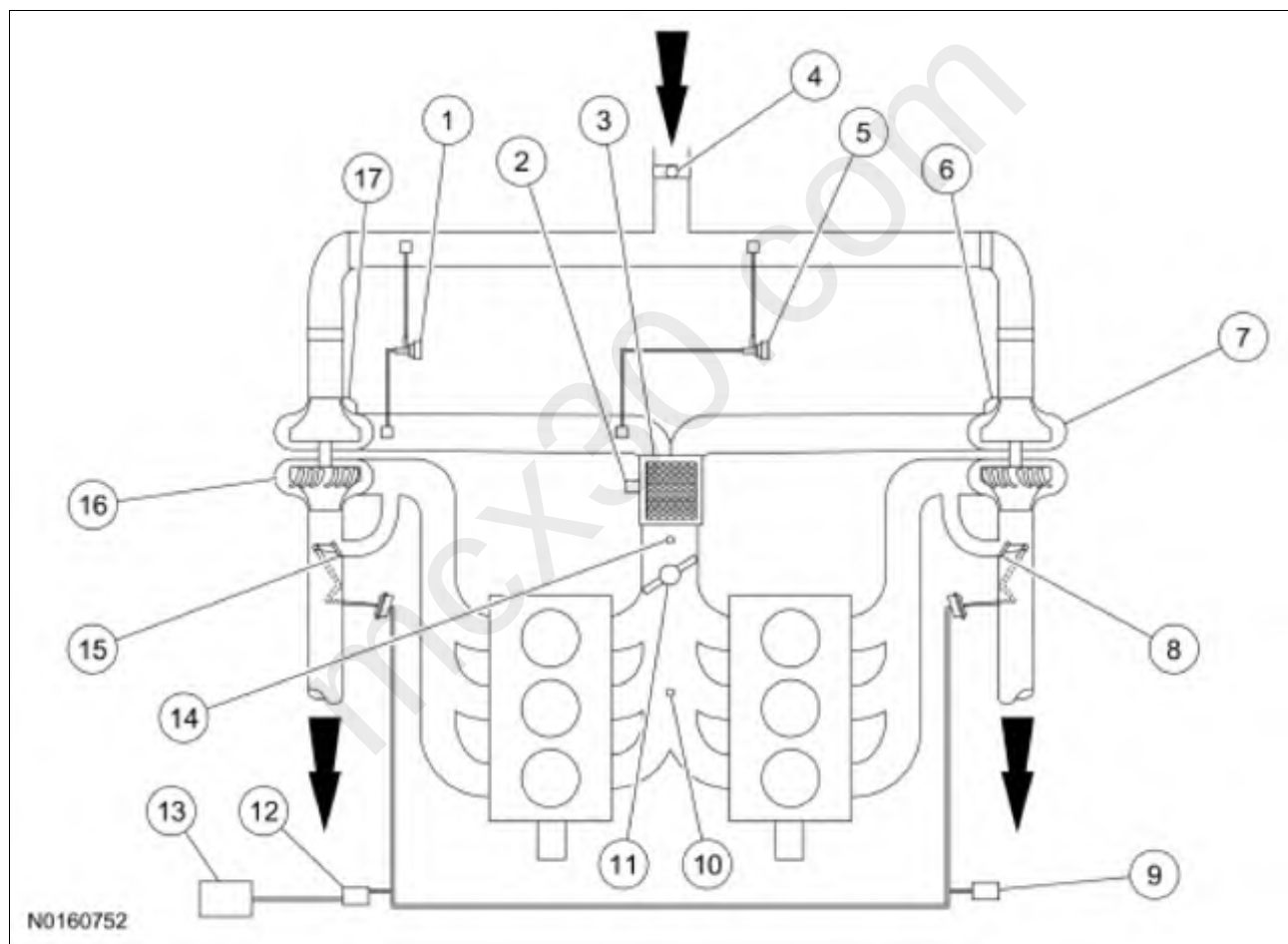


Courtesy of FORD MOTOR CO.

Turbocharger System	Component
1	Intake Air
2	Compressed Air
3	Exhaust Air
4	Air Filter
5	MAF/IAT Sensor (MAF Not Used)
6	Turbocharger Intake Compressor
7	Turbocharger Bypass Valve Solenoid
8	Vacuum Pump
9	Cylinder Head
10	Turbocharger Exhaust Turbine
11	Outlet To Exhaust System

12	Turbocharger Wastegate
13	Exhaust Manifold
14	Intake Manifold
15	MAP Sensor
16	Intake Throttle Assembly
17	Turbocharger Boost Pressure/Charger Air Cooler Temperature (TCBP/CACT) Sensor
18	CAC
19	Turbocharger Bypass Valve

Fig 7: 6 Cylinder Turbocharger Airflow Diagram



Courtesy of FORD MOTOR CO.

Turbocharger System	Component
1	Turbocharger Bypass Valve Left Bank (Bank 2) (If Equipped)
2	Turbocharger Bypass Valve (Integrated in Charge Air Cooler) (If Equipped)