

## MARINE ENGINE CATALOG







TRI STAR MARINE ENGINES LEAD THE INDUSTRY IN QUALITY AND DURABILITY. ALL OF OUR MARINE ENGINES ARE BUILT USING THE LATEST IN STATE OF THE ART CNC MACHINING AND ASSEMBLY PROCESS. IN ADDITION, ALL OF OUR MARINE ENGINES ARE TESTED 100% UPON COMPLETION, INCLUDING FULL PRESSURE TESTING OF THE COOLING SYSTEM.

TRI STAR MARINE ENGINES ARE BUILT WITH HIGH QUALITY MARINE SPECIFIC PARTS THAT MEET AND MOST CASES EXCEED OF SPECIFICATIONS. FOR EXAMPLE, WE USE ONLY FORGED OR GRAPHITE COATED HYPEREUTECTIC PISTONS IN ALL OUR ENGINES. WE ALSO USE MARINE DESIGNED CAMS AND BRASS FREEZE PLUGS.



320 10TH AVENUE BALDWIN, WI 54002

1-800-322-5859

WWW.TRISTARENGINES.COM
MADE IN BALDWIN, WISCONSIN
REMANUFACTURING ENGINES SINCE 1988

#### GENERAL MOTORS MARINE

YEAR	C.I.D.	LITER	DESCRIPTION	ROTATION	PART #
1991 & UP	181	3.0	REMAN ENGINE, LX TYPE HEAD, 1PC. RMS, VERIFY STARTER TYPE	STD.	<u>P4152M</u>
1985	262	4.3	2PC. RMS FLAT TAPPET CAMSHAFT	STD.	P4049M
1986-1992	262	4.3	1PC. RMS WITH MECHANICAL FUEL PUMP PROVISION, ROLLER CAM	STD.	P4096M
1993-1996	262	4.3	BALANCE SHAFT MARINE ENGINE NO FUEL PUMP PROVISION ENGINE HAS 12 INTAKE MANIFOLD BOLTS	STD.	<u>P4097M</u>
1996-1999	262	4.3	BALANCE SHAFT ENGINE, WITH 3/8" STD. THREAD STARTER BOLTS, THIS ENGINE HAS 8 TOTAL INTAKE MANIFOLD BOLTS	STD.	<u>P4112M</u>
2000 & UP	262	4.3	BALANCE SHAFT ENGINE, WITH 10X1.25 METRIC THREAD STARTER BOLTS, THIS ENGINE HAS 8 TOTAL INTAKE MANIFOLD BOLTS, WITH OR WITHOUT CRANKSHAFT POSITION SENSOR	STD.	<u>P4165M</u>
2008 & UP	262	4.3	BALANCE SHAFT ENGINE, WITH 10X1.25 METRIC THREAD STARTER BOLTS, THIS ENGINE HAS 8 TOTAL INTAKE MANIFOLD BOLTS, MPI WITH CRANKSHAFT POSITION SENSOR, ALUMINUM TIMING COVER	STD.	<u>P4214M</u>
1977-1985	305	5.0	2PC. RMS WITH PERIMETER BOLT VALVE COVERS	STD.	P4058M
1986	305	5.0	1PC. RMS WITH PERIMETER BOLT VALVE COVERS	STD.	P4059M
1987-1995	305	5.0	1PC. RMS WITH CENTER BOLT VALVE COVERS	STD.	P4060M
1996 & UP	305	5.0	8 BOLT INTAKE MANIFOLD, PLASTIC TIMING COVER, WITHOUT CRANKSHAFT POSITION SENSOR	STD.	P4119M
2002 & UP	305	5.0	8 BOLT INTAKE MANIFOLD, PLASTIC TIMING COVER, WITH CRANKSHAFT POSITION SENSOR, MULTI PORT INJECTION	STD.	P4199M
1969-1985	350	5.7	2PC. RMS, PERIMETER BOLT VALVE COVERS	STD.	P4066M
1969-1985	350	5.7	2PC. RMS, PERIMETER BOLT VALVE COVERS	REV.	P4066MR
1986	350	5.7	1PC. RMS, PERIMETER BOLT VALVE COVERS	STD.	P4067M
1986	350	5.7	1PC. RMS, PERIMETER BOLT VALVE COVERS	REV.	P4067MR
1987-1995	350	5.7	IPC. RMS, CENTER BOLT VALVE COVERS, FLAT TAPPET CAM	STD.	P4068M
1987-1995	350	5.7	IPC. RMS, CENTER BOLT VALVE COVERS, FLAT TAPPET CAM	REV.	P4068MR
1991-1997	350	5.7	MAGNUM WITH 12 BOLT INTAKE MANIFOLD, ROLLER LIFTERS	STD.	P4069M
1996	350	5.7	8 BOLT INTAKE, USES BLOCK MOUNTED FUEL PUMP, WITHOUT CRANK POSITION SENSOR	STD.	P4196M
1996 & UP	350	5.7	8 BOLT INTAKE, NO PROVISION FOR BLOCK MOUNTED FUEL PUMP, WITHOUT CRANK POSITION SENSOR	STD.	<u>P4120M</u>
2002 & UP	350	5.7	8 BOLT INTAKE, NO PROVISION FOR BLOCK MOUNTED FUEL PUMP, WITH CRANK POSITION SENSOR	STD.	<u>P4197M</u>
2005 & UP	350	5.7	2005 UP MAG MPI WITH CRANK POSITION SENSOR, FITS SERIAL # 0W310000 AND UP	STD.	<u>P4212M</u>
2000-2001	383	6.2	STROKER ENGINE WITHOUT CRANK POSITION SENSOR, FITS SERIAL # 0L680003 - 0M299999	STD.	<u>P4215M</u>
2002 & UP	383	6.2	STROKER ENGINE WITH CRANK POSITION SENSOR, FITS SERIAL # OM300000 AND UP	STD.	<u>P4201M</u>
1977-1990	454	7.4	GEN IV WITH 2PC. RMS, SMALL OVAL PORT HEADS, FLAT TAPPET	STD.	P4077M
1977-1990 1977-1990	454 454	7.4 7.4	GEN IV WITH 2PC. RMS, SMALL OVAL PORT HEADS, FLAT TAPPET GEN IV WITH 2PC. RMS, HIGH FLOW RECTANGLE PORT HEADS,	REV. STD.	P4077MR P4250M
1991-1996	454	7.4	FLAT TAPPET GEN V 1PC. RMS WITH SMALL OVAL PORT HEADS, FLAT TAPPET	STD.	<u>P4108M</u>
1991-1996	454	7.4	MAGNUM WITH 12 BOLT INTAKE MANIFOLD, ROLLER LIFTERS, HIGH FLOW RECTANGLE PORT HEADS, FLAT TAPPETS	STD.	P4300M
1996-1997	454	7.4	GEN VI BLOCK WITH SMALL OVAL PORT HEADS, ROLLER LIFTERS	STD.	P4216M
1996 & UP	454	7.4	GEN VI BLOCK, MAGNUM HEADS WITH LARGE RECTANGLE PORTS, ROLLER CAM AND LIFTERS	STD.	P4217M
1998 & UP	454	7.4	GEN VI MPI L-29 WITH ROLLER LIFTERS, NO EXHAUST CROSSOVER IN HEADS ON INTAKE FACE.	STD.	P4148M
2001 & UP	496	8.1	MAGNUM LONG BLOCK ONLY	STD.	P4178M
2001 & UP	496	8.1	MAGNUM H.O. CHECK AVAILABILITY LONG BLOCK ONLY	STD.	P4178MH
ALL	502	8.2	1PC. RMS WITH HIGH FLOW RECTANGLE PORT HEADS, GEN VI, ROLLER	STD	P4202M

### MUST DO MARINE ENGINE INSTALLATION TIPS

#### **COOLING SYSTEM**

- 1. ALWAYS REPLACE RAW WATER PUMP
- 2. REPLACE ENGINE WATER CIRCULATING PUMP
- 3. INSPECT EXHAUST MANIFOLDS AND REPLASE RISER GASKETS
- 4. INSPECT INTAKE MAIFOLD FOR CRACKS IN WATER JACKETS

#### **FUEL SYSTEM**

- 1. REBUILD CARBURETOR AND INSPECT THROTTLE SHAFT FOR WEAR
- 2. REPLACE ALL FUEL FILTERS
- 3. REPLACE FUEL THAT IS OF UNKNOWN QUALITY

#### LUBRICATION

- 1. REPLACE OIL COOLER
- 2. PRIME OILING SYSTEM UNTIL PRESSURE READS ON A MANUAL GAUGE
- 3. VERIFY OIL LEVEL AFTER PRIMING COMPLETE SYSTEM

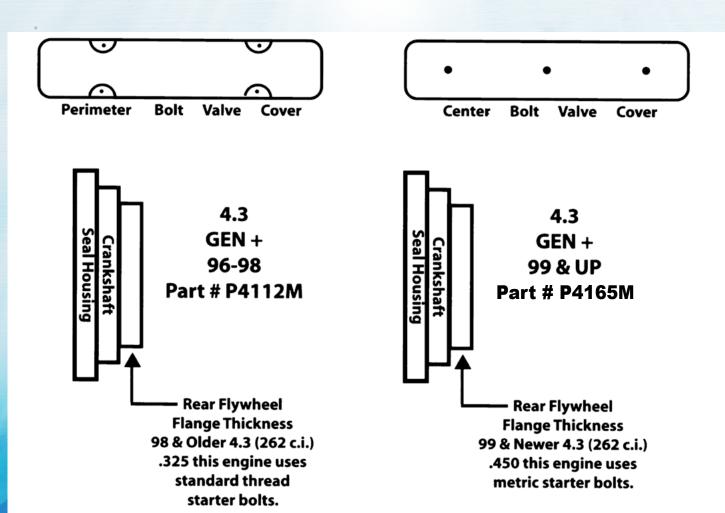
#### **IGNITION SYSTEM**

- 1. REPLACE SPARK PLUG WIRES
- 2. INSPECT DISTRIBUTOR AND REPLACE WORN COMPONENTS
- 3. SET TIMING ACCORDING TO MANUFACTURER'S SPECS
- 4. VERIFY BASE AND TOTAL TIMING ADVANCE WHEN APPLICABLE

IF AFTER READING THROUGH THIS CHECKLIST YOU HAVE ANY QUESTIONS PLEASE CALL 1.800.322.5859 FOR TECHNICAL ASSISTANCE



#### **APPLICATION NOTES**



Engine rotation is one of the most common types of mis-applications. It is highly recommended that when ordering an engine, that its rotation be checked by a qualified mechanic and compared to the guide listed below.

#### Engine Rotation, as viewed from behind the flywheel



#### WARRANTY

TRI STAR REPLACEMENT MARINE ENGINES INCLUDE A 2 YEAR LIMITED WARRANTY. TO RECEIVE A COPY OF THE COMPLETE WARRANTY PLEASE CONTACT ONE OF OUR CUSTOMER SERVICE REPRESENTATIVES.

#### GENERAL INFORMATION

TO ENSURE TROUBLE FREE PERFORMANCE OF YOUR REMANUFACTURED TRI STAR ENGINE, IT MUST BE PROPERLY MAINTAINED. THIS INCLUDES BUT NOT LIMITED TO:

- 1. OIL AND FILTER CHANGED AFTER INITIAL 5 HOURS OF SERVICE, SUBSEQUENT CHANGES AT 60 DAYS/25 HOURS.
- 2. REGULAR CHECK OF ALL FLUID LEVELS THROUGHOUT THE ENGINE. DAMAGE
  RESULTING FROM OPERATING THE ENGINE WITHOUT ADEQUATE OIL IN THE CRANKCASE
  WILL VOID THE WARRANTY.
- 3. TUNE-UP, FILTERS, BELT AND HOSE REPLACEMENT AT O.E.M. RECOMMENDATIONS.
- 4. COOLING SYSTEM MUST BE MAINTAINED TO OPERATE AT NORMAL TEMPERATURES.

RECORDS OF THE MAINTENANCE PERFORMED, RECEIPTS, AND WORK ORDERS MUST BE KEPT. THE PARTS, LABOR, DATE AND HOURS OF SERVICE PERFORMED MUST BE DOCUMENTED ON THE RECEIPTS. FAILURE TO PERFORM THESE BASIC OPERATIONS WILL RESULT IN A VOIDED WARRANTY.

THIS CATALOG WAS PREPARED WITH THE BEST INFORMATION AVAILABLE. MANY OF THE DESCRIPTIONS AND YEARS GIVEN ARE OF A GENERIC NATURE. THEY ARE INTENDED AS A GENERAL GUIDE, AND NOT TO BE USED AS A SPECIFIC APPLICATION, UNLESS OTHERWISE NOTED. TRI STAR ENGINES COVER A WIDE RANGE OF USES AND APPLICATIONS, IT IS THEREFORE THE RESPONSIBILITY OF THE INSTALLER TO CAREFULLY COMPARE THE NEW ENGINE TO THE APPLICATION BEFORE BEGINNING THE INSTALLATION, AND CONTACT THE SUPPLIER IF SIGNIFICANT PROBLEMS OR DIFFERENCES ARE ENCOUNTERED.

ALL SPECIFICATIONS AND PARTS CONTENT ARE ACCURATE AT THE TIME OF PRINTING, HOWEVER TRI STAR RESERVES THE RIGHT TO CHANGE SPECIFICATIONS OR SUBSTITUTE PARTS CONTENT OR PACKAGING WITHOUT NOTICE.



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