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BRIGGS&STRATTON
CORPORATION

POST OFFICE BOX 702
MILWAUKEE, WI 53201 USA
414 259 5333

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THE POWER WITHIN™



ANIMAL
series



Racing Performance Catalog & Reference Guide



Model/Type: 124332 8202-01



Model/Type: 124432 8003-01



Model/Type: 124332 8201-01

Version 9/10



Model/Type: 124332 8203-01



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SAFETY

BEFORE OPERATING ENGINE

- Read entire Operating & Maintenance Instructions AND the instructions for the equipment this engine powers.*
- Failure to follow instructions could result in serious injury or death.

THESE INSTRUCTIONS CONTAIN SAFETY INFORMATION TO

- Make you aware of hazards associated with engines
- Inform you of the risk of injury associated with those hazards, and
- Tell you how to avoid or reduce the risk of injury.

The safety alert symbol () is used to identify safety information about hazards that can result in personal injury.

A signal word (DANGER, WARNING, or CAUTION) is used with the alert symbol to indicate the likelihood and the potential severity of injury. In addition, a hazard symbol may be used to represent the type of hazard.

DANGER
Indicates a hazard which, if not avoided, **will result in death or serious injury.**

WARNING
Indicates a hazard which, if not avoided, **could result in death or serious injury.**

CAUTION
Indicates a hazard which, if not avoided, **might result in minor or moderate injury.**

CAUTION, when used **without** the alert symbol, indicates a situation that **could result in damage to the engine.**

WARNING

The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

HAZARD SYMBOLS AND MEANINGS

Fire

Explosion

Toxic Fumes

Hot Surface

Moving Parts

Kickback

Shock

THE INTERNATIONAL SYMBOLS USED ON THE ENGINE OR IN THIS MANUAL INCLUDE:

Safety Alert

Read Owner's Manual

Fuel

Fuel Shutoff

Oil

Choke

Stop

On Off

WARNING

Engines give off carbon monoxide, an odorless, colorless, poison gas.

Breathing carbon monoxide can cause nausea, fainting or death.

- Start and run engine outdoors.
- Do not start or run engine in enclosed area, even if doors or windows are open.

WARNING

Rapid retraction of starter cord (kickback) will pull hand and arm toward engine faster than you can let go.

Broken bones, fractures, bruises or sprains could result.

- When starting engine, pull cord slowly until resistance is felt, then pull rapidly.
- Remove all external equipment/engine loads before starting engine.
- Direct coupled equipment components such as, but not limited to, blades, impellers, pulleys, sprockets, etc., must be securely attached.

WARNING

Risk of death or serious injury

Work must be performed on engine prior to starting or operating to reduce the risk of death, serious injury and property damage.

Before using this engine:

- Install a return to idle spring. This engine does not have a governor.
- After any engine modification replace stock flywheel with an appropriate flywheel.

Read Repair Manual

Special skills and knowledge are required to prepare the engine for competitive events and sanctioned racing. Only qualified persons should perform this work.

* Briggs & Stratton does not necessarily know what equipment this engine will power. For that reason, you should carefully read and understand the operating instructions for the equipment on which your engine is placed.

! WARNING

Gasoline and its vapors are extremely flammable and explosive.

Fire or explosion can cause severe burns or death.

WHEN ADDING FUEL

- Turn engine OFF and let engine cool at least 2 minutes before removing gas cap.
- Fill fuel tank outdoors or in well-ventilated area.
- Do not overfill fuel tank. Fill tank to approximately 1-1/2 inches below top of neck to allow for fuel expansion.
- Keep gasoline away from sparks, open flames, pilot lights, heat, and other ignition sources.
- Check fuel lines, tank, cap, and fittings frequently for cracks or leaks. Replace if necessary.

WHEN STARTING ENGINE

- Make sure spark plug, muffler, fuel cap and air cleaner are in place.
- Do not crank engine with spark plug removed.
- If fuel spills, wait until it evaporates before starting engine.
- If engine floods, set choke to OPEN/RUN position, place throttle in FAST and crank until engine starts.

WHEN OPERATING EQUIPMENT

- Do not tip engine or equipment at angle which causes gasoline to spill.
- Do not choke carburetor to stop engine.

WHEN TRANSPORTING EQUIPMENT

- Transport with fuel tank EMPTY or with fuel shut-off valve OFF.

WHEN STORING GASOLINE OR EQUIPMENT WITH FUEL IN TANK

- Store away from furnaces, stoves, water heaters or other appliances that have pilot light or other ignition source because they can ignite gasoline vapors.

! WARNING

Unintentional sparking can result in fire or electric shock.

Unintentional start-up can result in entanglement, traumatic amputation, or laceration.

BEFORE PERFORMING REPAIRS OR ADJUSTMENTS

- Disconnect spark plug wire and keep it away from spark plug.
- Disconnect battery at negative terminal (only engines with electric start).

WHEN TESTING FOR SPARK

- Use approved spark plug tester.
- Do not check for spark with spark plug removed.

! WARNING

Running engines produce heat. Engine parts, especially muffler, become extremely hot.

Severe thermal burns can occur on contact.

Combustible debris, such as leaves, grass, brush, etc. can catch fire.

- Allow muffler, engine cylinder and fins to cool before touching.
- Remove accumulated combustibles from muffler area and cylinder area.
- Install and maintain in working order a spark arrester before using equipment on forest-covered, grass-covered, brush-covered unimproved land. The state of California requires this (Section 4442 of the California Public Resources Code). Other states may have similar laws. Federal laws apply on federal land.

! WARNING

Rotating parts can contact or entangle hands, feet, hair, clothing, or accessories.

Traumatic amputation or severe laceration can result.

- Operate equipment with guards in place.
- Keep hands and feet away from rotating parts.
- Tie up long hair and remove jewelry.
- Do not wear loose-fitting clothing, dangling drawstrings or items that could become caught.

! WARNING

Starting engine creates sparking.

Sparking can ignite nearby flammable gases.

Explosion and fire could result.

- If there is natural or LP gas leakage in area, do not start engine.
- Do not use pressurized starting fluids because vapors are flammable.

! WARNING

Replacement parts for fuel system (cap, hoses, tanks, filters, etc.) must be the same as original parts, otherwise fire can occur.

! WARNING

DO NOT strike the flywheel with a hammer or hard object because the flywheel may later shatter during operation.

ANIMAL



GENERAL SPECS

Model: 124432
Type: 8003-01 - Animal
 8201-01 - Jr. 206
 8202-01 - LO 206
 8203-01 - M Series
Displacement: 12.48 Cu. in. - 205cc
Design: Slant, 30 degree Overhead Valve
Bore: 2.6875/2.6885 in.
Stroke: 2.2 in.
Compression Ratio: 8.5 to 1
Factory Timing: 29 degrees BTDC

SPECIAL TOOL REQUIREMENTS

General Model 12 Manual Part No. 276781
Flywheel Holder Tool Part No. 19433
PVL Flywheel Puller Part No. 19584

TORQUE SPECS

DESCRIPTION	WRENCH/SOCKET SIZE	TORQUE
Air Guard	7mm	40-50 lb-in. (4.5-5.6 Nm)
Blower Housing	10mm & 3/8"	60-110 lb-in. (7-12.5 Nm)
Carburetor (to manifold)	10mm	80-110 lb-in. (9-12.4 Nm)
Connecting Rod	T27	140-150 lb-in. (16-17 Nm)
Cylinder Head Bolts	10mm	200-220 lb-in. (20-27 Nm)
Exhaust Brace Screws	10mm	95-125 lb-in. (11-14 Nm)
Exhaust Stud	10mm	95-125 lb-in. (11-14 Nm)
Flywheel Nut	15/16	55-75 ft-lbs. (74.5-101 Nm)
Flywheel Fan	10mm	180-240 lb-in. (20-27 Nm)
Intake (to cylinder)	5mm Allen	70-90 lb-in. (8-10.2 Nm)
Oil Drain Plug	3/8"	100-125 lb-in. (11-14 Nm)
PVL Module	7mm	20-35 lb-in. (2.3-4 Nm)
Rocker Arm Stud	7/16"	90-120 lb-in. (10-14 Nm)
Rocker Arm Plate	10mm	70-90 lb-in. (7.9-10.1 Nm)
Rocker Arm Set Screw	1/8" Allen	50-70 lb-in. (5.6-7.9 Nm)
Spark Plug	5/8" Deep	95-145 lb-in. (11-16.4 Nm)
Slide Cover	10mm	95-125 lb-in. (11-14 Nm)
Starter Gear	#2 Phillips	35-53 lb-in. (4-6 Nm)
Top Control Plate	10mm	70-90 lb-in. (8-10 Nm)
Valve Cover	10mm Lower & 3/8"	30-60 lb-in. (3.5-7 Nm)

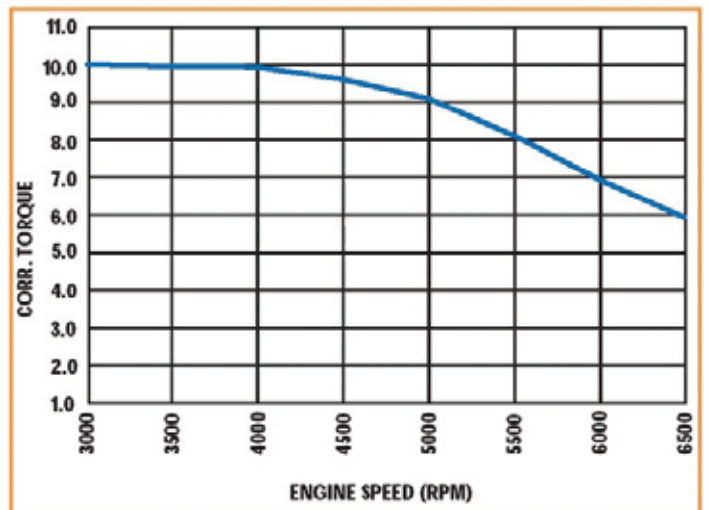
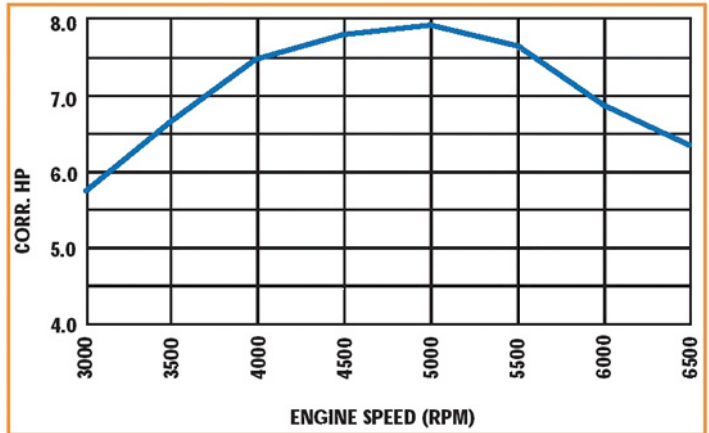
RACING SPECIFICS

PVL™ Ignition Module Gap - .010/.014 (.15/.36mm)
Digital Rev Limiter: Max. 12,000 RPM - Part No. 555719
Max. 6,100 RPM - Part No. 555718
Max. 4,100 RPM - Part No. 555725
Recommended Oil Capacity - 14-16 oz. of Kart racing oil. We no longer recommend using automotive oil beyond break-in due to recent domestic and international changes that could adversely affect product life.

OPTIONAL PERFORMANCE PARTS

High - G/Force Breather Bypass System - Part No. 555688
Magnetic Drain Plug - Part No. 691663
Gearbox Splined Crankshaft - Part No. 555722
6-1 Gearbox Complete - Part No. 555721 (page 9)
Electric Starter Kit - Part No. 555703
Fuel filter - Part No. 394358B

Animal - Horsepower / Torque Curves



HIGHLIGHTED FEATURES

- Dual Ball-Bearing, RACING Reinforced Cylinder
- Squeeze-Cast, T-7 Treated, Racing Rod
- Ground Cam w/ Compression Release
- High-Silicon Valve Springs
- PVL™ Digital Ignition System
- Racing Only Intake Port
- Walbro™ Round-Slide Carburetor
- Dana™ Fire-Ring Head Gasket (Animal Only)
- Racing Crankshaft w/ Induction-Hardened Crankpin
- Federal Mogul™ Cam Ground, Barrel-Faced Piston
- Chrome-Faced, Racing Ring Package
- Nitrited Dished Exhaust Valve
- Automotive 3-Piece Valve Retainer System
- Beefy Rocker Arm Stud Nuts

ANIMAL cylinder assembly

(Engine Model Series 124432)

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ANIMAL ENGINES

276781 Repair Manual

- 555660 Piston Assembly (Std.)
- 555661 Piston Assembly (.10" Over)
- 555662 Piston Assembly (.20" Over)
- 555663 Piston Assembly (.30" Over)

- 555664 Ring Set (Std.)
- 555665 Ring Set (.10" Over)
- 555666 Ring Set (.20" Over)
- 555667 Ring Set (.30" Over)

- 55513 Ring Set (.10" Over - Contains 10 Top Rings)
- 55514 Ring Set (.20" Over - Contains 10 Top Rings)
- 55515 Ring Set (.30" Over - Contains 10 Top Rings)

555688 High-G/Force Bypass Assembly
(Optional, Also includes 691890 Rocker Cover Gasket)

555140 Bushing/Seal Kit
692600 Breather Tube

792723 Flywheel Nut†
(M6 x 1.5 - 6H)
299819s Oil Seal*
(Magneto Side)

555680 Cylinder Shield (Black)
693610 Cylinder Shield (Silver)

699483 Screw
(Cylinder Shield - M4 x .7)

699485 Crankcase Gasket • *

691664 Hex Head 1" Screw
(Connecting Rod - Animal/206)
791784 Hex Head 1 1/4" Screw
(Connecting Rod - World Formula)

557137 Crankshaft

555626 Connecting Rod

691686 Oil Drain Plug*
691663 Oil Drain Plug
(Magnetic, Optional)

555705 Cylinder Assembly

695087 Timing Gear†
692517 Bearing •

690959 Locating Pin*

281658s Oil Fill Cap •

690824 Ball Bearing†

222698s Flywheel Key

557117 World Formula Billet
(Optional)

555626 Connecting Rod

499423 Piston Pin

691866 Piston Pin Lock •

690979 Woodruff Key†

696813 Camshaft
(Machined)

555584 Camshaft
(Unmachined)

555652 Crankshaft Endplay Shim
(Contains .007, .012, .018, & .025)

281658s Oil Fill Cap •

692550 Oil Seal •
(PTO Side)

555706 Crankcase Cover

699478 Hex Washer Head Metric Screw
(Crankcase Cover/Sump - M7 x 1)

*** Included with 555705 Cylinder Assembly**
(Includes all parts shown)

• Included with Respective Piston Assembly
(Includes all parts shown)

† Included with 557137 Crankshaft

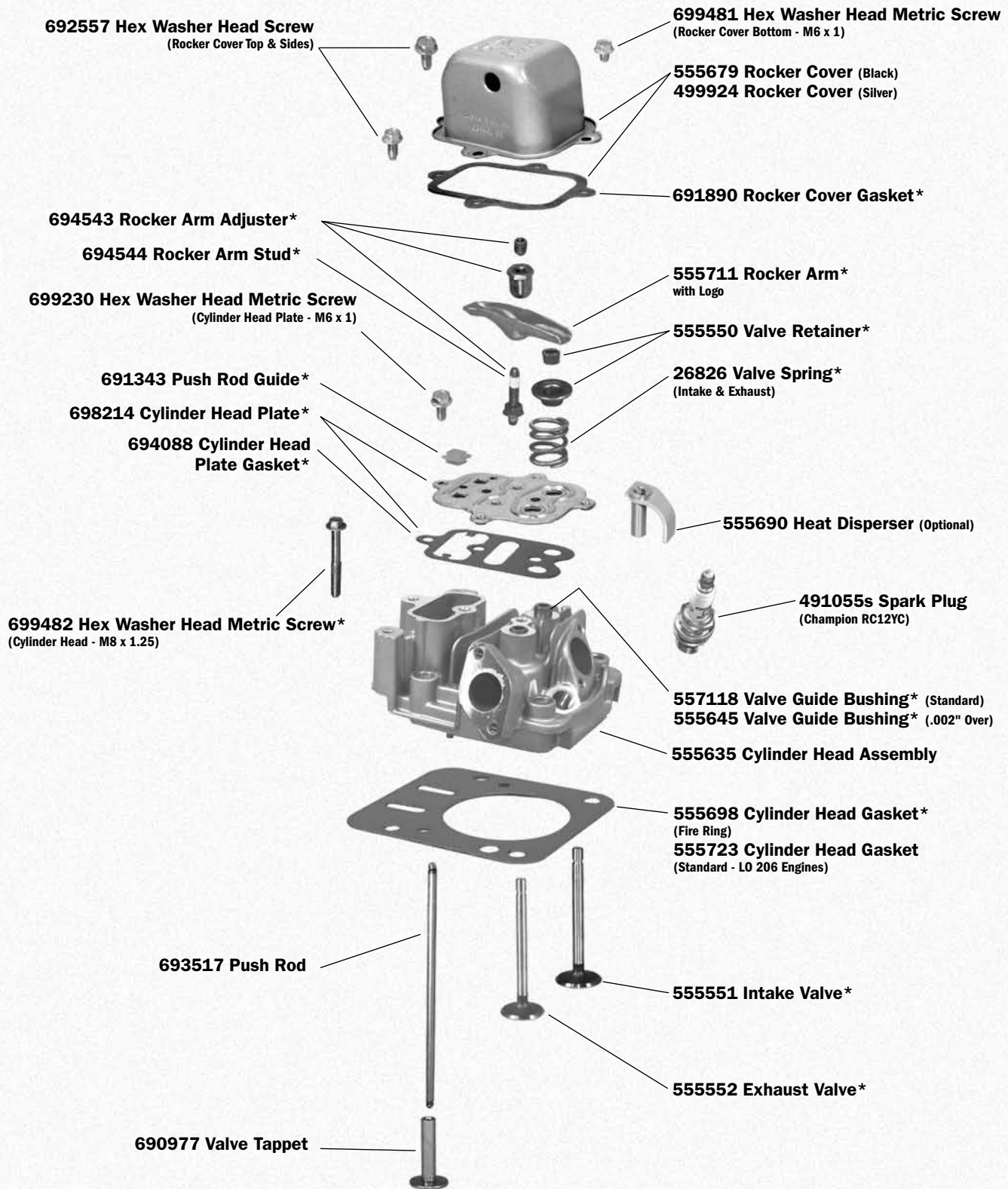
• Included with 555706 Crankcase Cover

ANIMAL head assembly

(Engine Model Series 124432)

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*Included with 555635 Cylinder Head Assembly

ANIMAL ENGINES

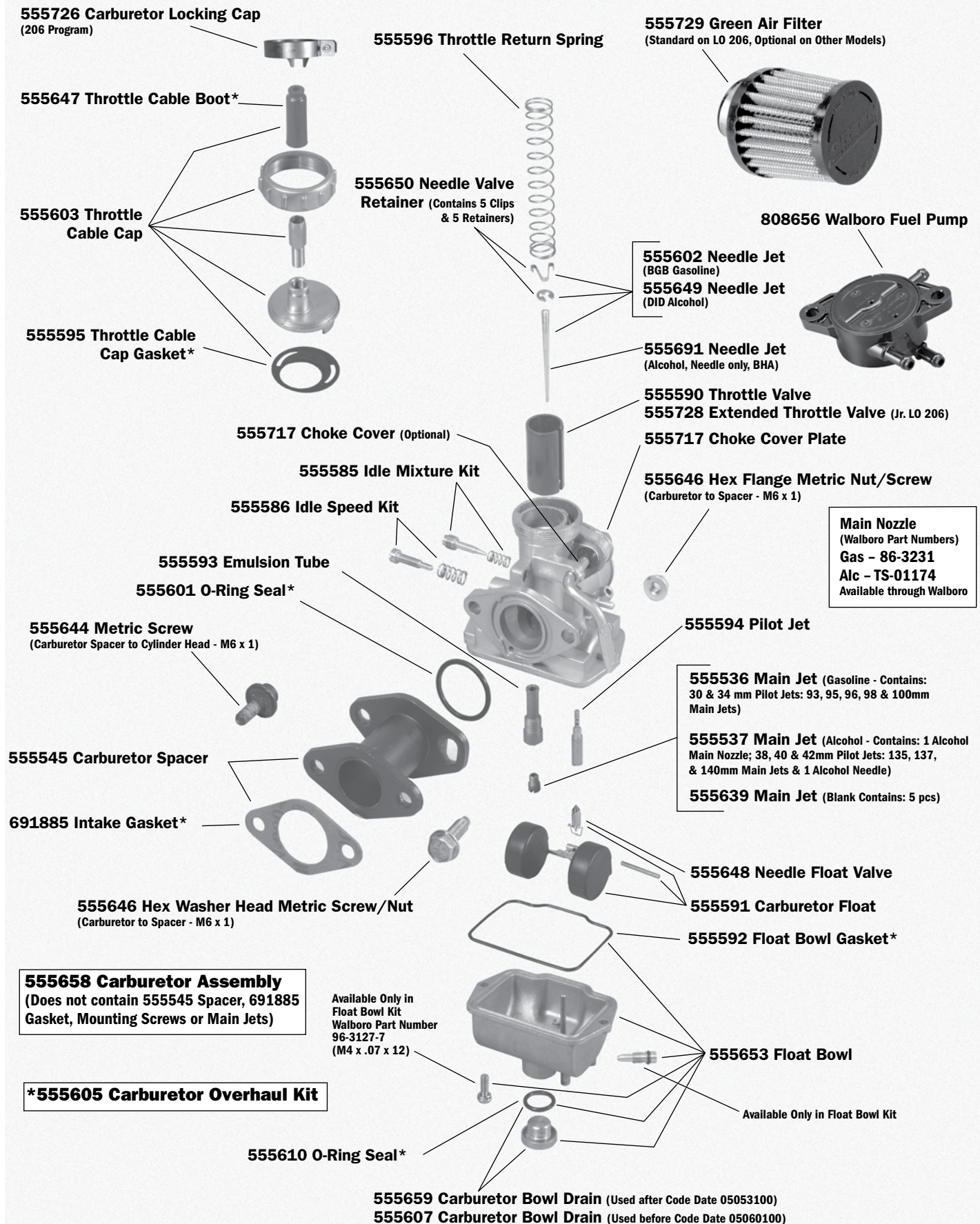
ANIMAL carburetor assembly

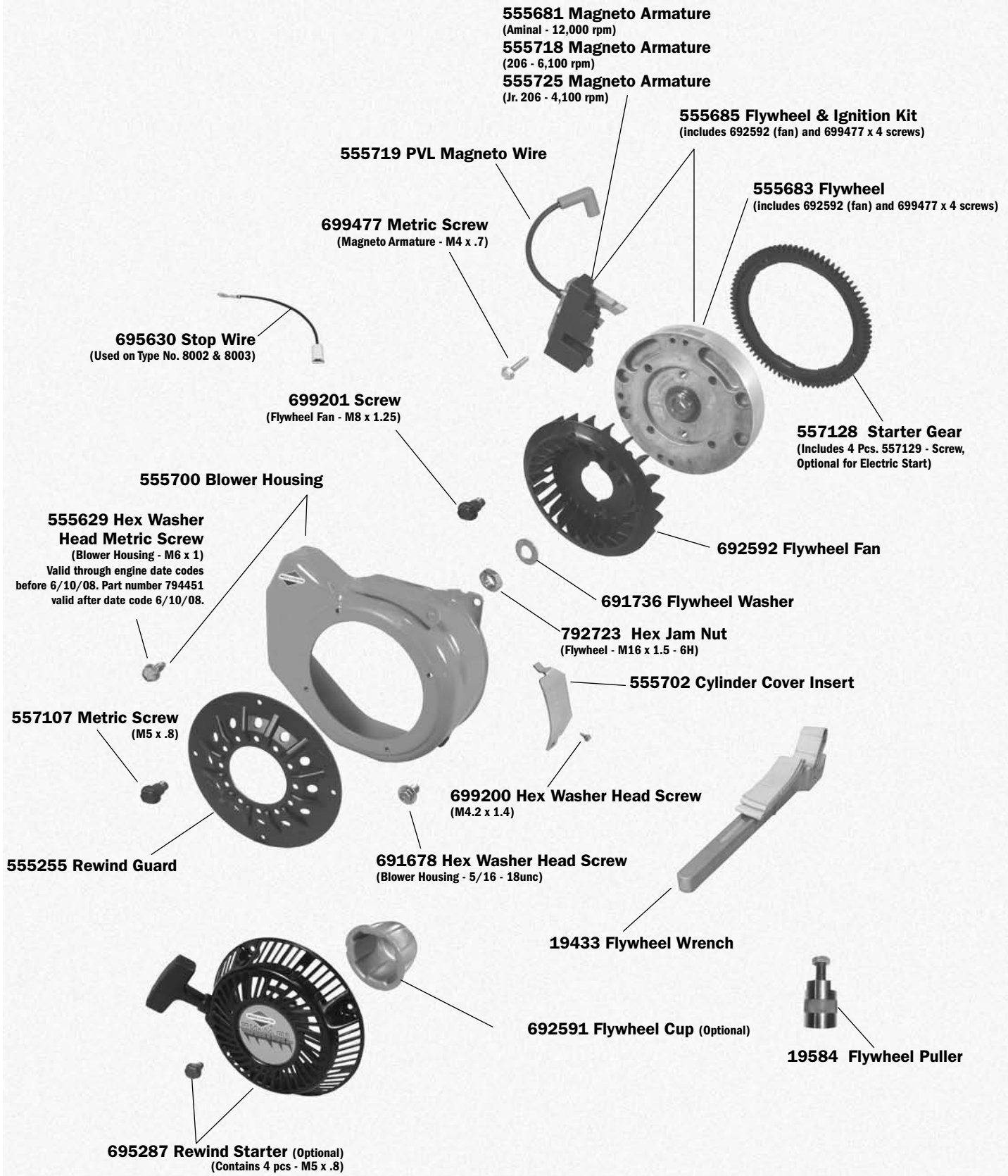
(Engine Model Series 124432)

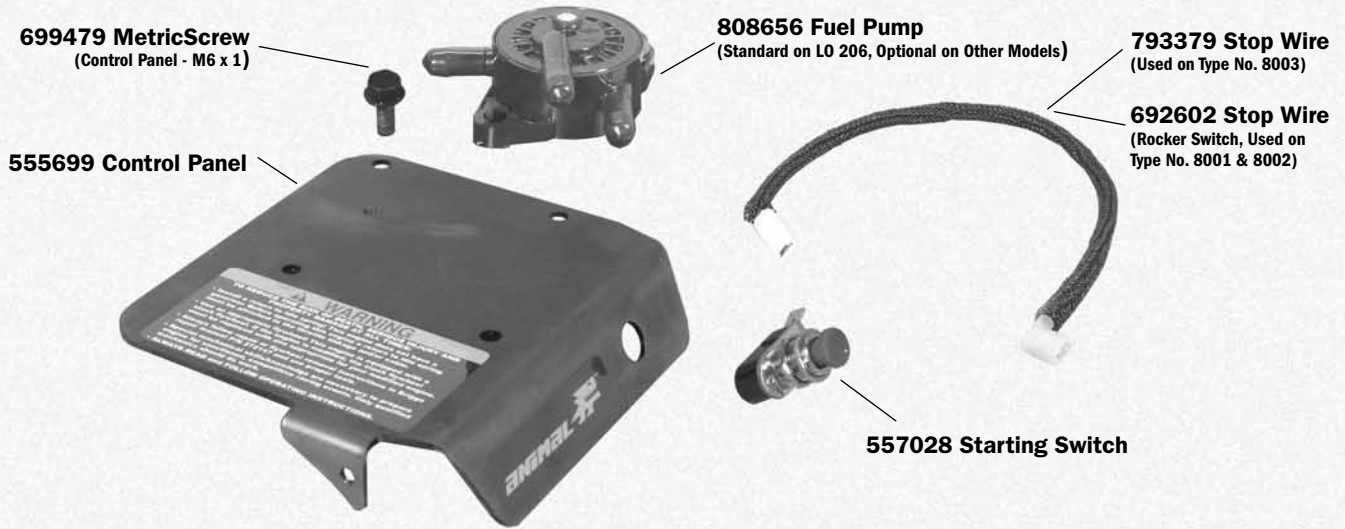
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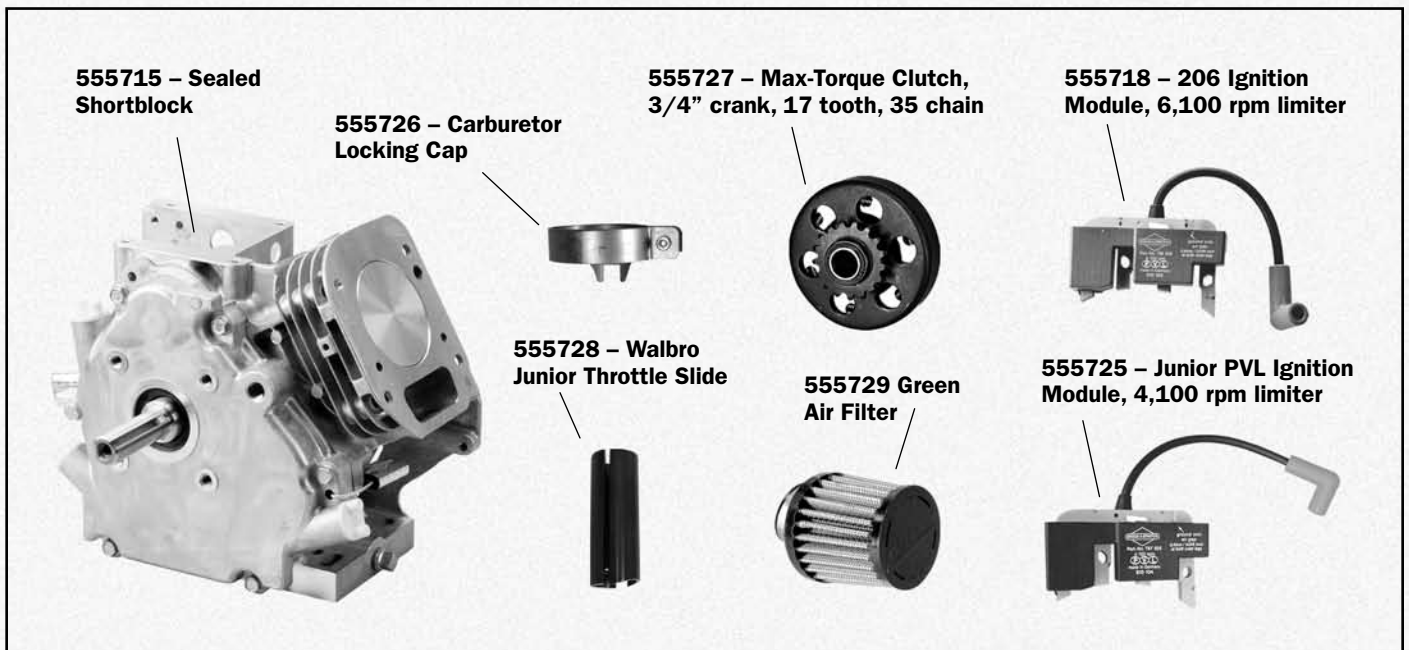
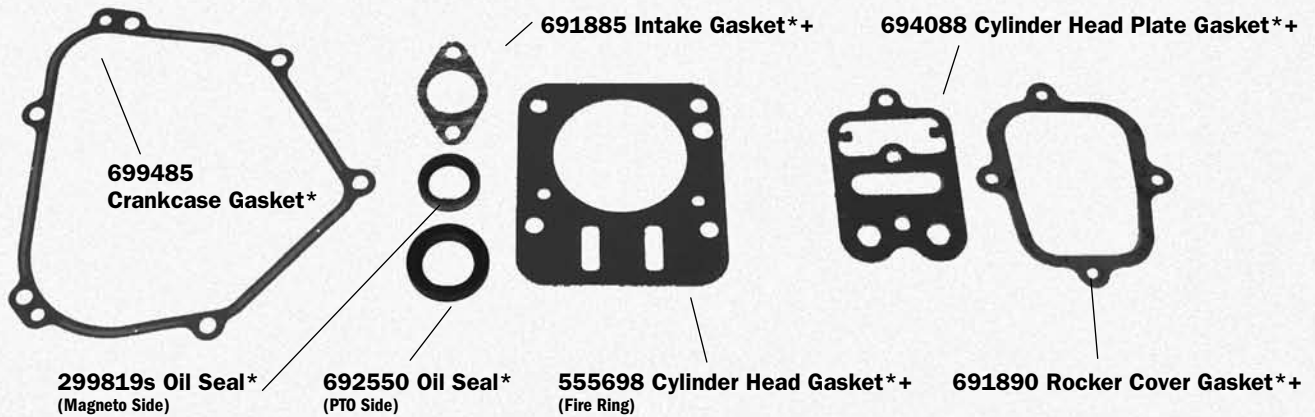






***Included with 555631 Engine Gasket Set**

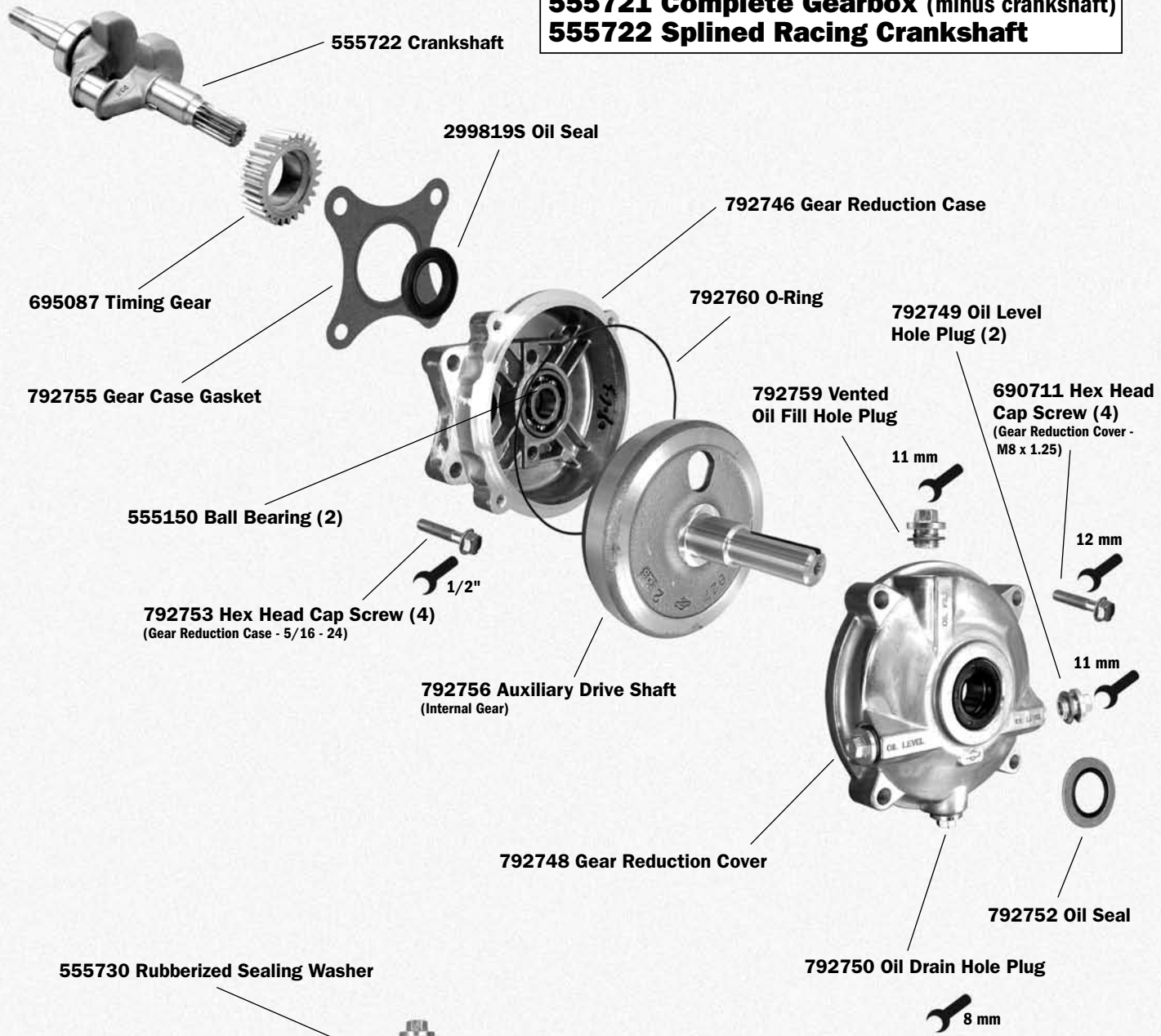
+ Included with 555636 Valve Gasket Set



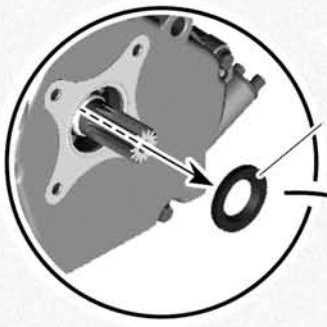


ANIMAL ENGINES

**555721 Complete Gearbox (minus crankshaft)
 555722 Splined Racing Crankshaft**



Vented Oil Fill Plug Position Important:
 The vented oil fill plug in the cover must mount in the 12 o'clock position.



IMPORTANT
 Engine seal must be removed before installing this gearbox.