



**aasco**  
**motor** *sports*

DESIGNED & MANUFACTURED IN THE U.S.A.

**INSTALLATION INSTRUCTIONS**  
**IMPORTANT**  
**PLEASE READ**

## INSTALLATION INSTRUCTIONS IMPORTANT

### PLEASE READ

The end user must verify fitment before installation.

Please take a moment to read these instructions in their entirety before you begin the installation

Professional installation is recommended.

The following flywheel installation tips will help guarantee that your new flywheel will perform to the highest OEM standards.

**Aasco Motorsports** flywheels are manufactured to the highest quality and will perform to OEM specifications if installed and used as designed.

**Aasco Motorsports** flywheels are Zero-Balanced from our factory.

**Aasco Motorsports** flywheels may include a torque plate, fasteners for the flywheel to crank as well as pressure plate hardware depending on the application. The torque plate in all cases must be used if supplied.

**Aasco Motorsports** flywheels are designed to replace your OE single or dual-mass flywheel utilizing the stock pressure plate unless otherwise specified.

**We recommend** always replacing the clutch disc, pressure plate and throw-out bearing with new good quality OEM or aftermarket parts.

**Do not reuse flywheel to crank bolts-** Regardless of the bolts to be used they must be checked for proper length (See illustration below). Whether purchasing new OEM, ARP or their equivalent modifying may be necessary. Make sure that the flywheel bolts thread properly into the crankshaft smooth with no binding. If binding is felt, it may be necessary to “chase” the threads with a proper thread chaser.

**Aasco Motorsports** is not responsible for any damage resulting from the incorrect length or quality of fastener.

### Pre-installation check

Remove the flywheel from the package and clean all rust preventative solution from the flywheel surface using a degreasing solvent such as brake clean. Failure to do so may cause premature clutch failure.

Applications with reluctors (Trigger wheels) on the flywheel. Compare by setting the OEM flywheel on top of the Aasco Motorsports flywheel with the crank holes lined up to verify reluctor position.

Check release bearing, release bearing guide tube and or clutch fork for wear and replace if necessary.

Check for any sign of oil leaks. If an oil leak is found repair the seals or gaskets as necessary.

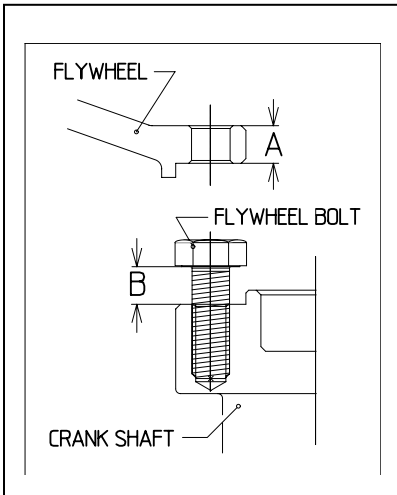
Check that the crankshaft-to-flywheel mounting flange surface is clean and free of any debris before installation of the flywheel onto the crankshaft.

Check the flywheel and clutch for clearance inside of the bellhousing and the engine before final assembly. The most common areas of concern are, but are not limited to, the bellhousing, oil pan, sensors, engine blocks.

## INSTALLATION

### Flywheel

**Do not reuse flywheel to crank bolts-** Regardless of the bolts to be used they must be checked for proper length (See illustration below). Whether purchasing new OEM, ARP or their equivalent modifying may be necessary. Make sure that the flywheel bolts thread properly into the crankshaft smooth with no binding. If binding is felt, it may be necessary to “chase” the threads with a proper thread chaser.



### IMPORTANT-CHECK BOLT LENGTH

Tighten the flywheel bolt into the crankshaft.

Note measurement “B”.

Measure “A” include torque plate if supplied.

Subtract  $A-B$ =clearance.

There must be a minimum of .080” to .100” of free clearance in threaded hole.

Because of the complexity of some applications Aasco recommends professional installation.

If you are capable follow your factory service manual for removal and installation. If you are using other than OEM fasteners tighten flywheel to crank and pressure plate to flywheel bolts per that manufactures recommendations.

It is important not to allow any threadlocker to seep between the flywheel and the crankshaft flange. The following procedure is the correct method:

1. Using torque plate if supplied insert and tighten evenly in a cross hatch pattern all fasteners to 20 ft/ft.

2. Removing one fastener at a time apply Loctite® threadlocker or equivalent to the flywheel bolt threads re-install and tighten to 20ft/lb. Continue with the remaining fasteners.
3. **Continue to torque all flywheel-to crankshaft bolts to manufacturer's specifications.**

**IMPORTANT:** If fasteners are supplied or a non yield to torque fastener is used see the bolt torque chart for specifications. Improper tightening could cause the fasteners to fail.

***Important! Do not use an impact driver to tighten flywheel-to-crankshaft bolts.***

#### FLYWHEEL FASTENER TORQUE GUIDE

Flywheel to Crank			Pressure Plate to Flywheel		
Bolt Dia	FT/lb	nm	Dia	FT/lb	nm
10X1.0	55	75	8X1.0	20	27
10X1.25	65	88	8X1.25	20	27
12X1.0	87	118	7X1.0	15	20
12X1.25	96	130	5/16-24	20	27
12X1.5	80	108	5/16-18	20	27

If fastener is not listed use OEM torque specifications

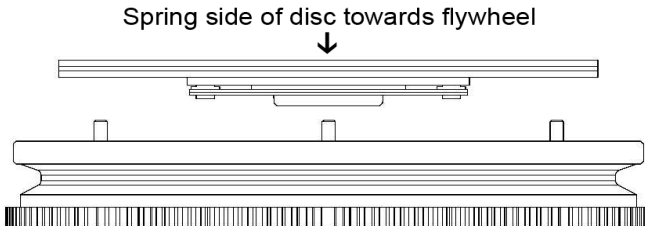
#### CLUTCH DISC

The use of button or metallic clutch discs will increase the holding capacity of your clutch assembly. However, because of the aggressive nature of these types of discs and the need for them in some motorsports applications all manufacturer warranties implied or expressed will be void.

If a sprung type clutch disc is to be used in place of an OEM rigid disc see the illustration for proper positioning unless otherwise specified by the clutch manufacturer.

Position the clutch disc onto the flywheel using an alignment tool and place the pressure plate onto the flywheel dowel pins. Thread all clutch bolts into the flywheel and tighten gradually until the pressure plate is fully seated onto the flywheel mounting surface. Torque the pressure plate bolts (**see bolt torque chart**).

***Important! Do not use an impact driver to tighten pressure plate bolts***



## **Heat Shield Installation Instructions**

As always proper maintenance will provide you with trouble free performance from your Aasco product.

### **Tools required:**

Aasco replacement heat shield, Special service tool (P.N. AA-SKT375), 1/8" allen wrench

Tilton and Porsche parts that utilize 10-32 MSN lock nuts and AN washers 0.06" thick, ¼" socket and a #10 Torq-set screw driver or bit.

Always replace the Heat Shield when replacing the clutch disc.

### **Heat Shield removal**

Hold head of fastener with the appropriate tool while loosening the retaining nut.

Clean flywheel thoroughly.

Install new heat shield; insert all of the screw with red Loctite® threadlocker.

Tighten fasteners to 72in/lb using a cross pattern.

### **Heat shield kit contents:**

(Contents of kits may change without notice)

#### HS 7450 Aasco .178" thick

(16) 3/4" flat head socket screws, (16) 7/8" flat head socket screws & (16) 10-32 fastener flange nuts

#### HS 7365 .250" thick Tilton replacement for 50-602

(12) 3/4" flat head socket screws, (12) 7/8" flat head socket screws & (12) 10-32 MSN lock nut with (12) AN washers .06" thick

#### HS 50-603 .157" thick Tilton

(12) ¾" flat head Torq-set screws 100° head & (12) 10-32 MSN lock nut with (12) AN washers .06" thick

#### HS 8050/ 8350/ 8750

(16) ¾" flat head socket screws & (16) 10-32 fastener flange nuts.

Note: HS8750 requires 12 fasteners

#### HS 9057/ 9587/ 9587T/ 1050/ 1060

(12) ¾" flat head socket screws, (12) 7/8" flat head socket screws & (12) 10-32 fastener nuts

Note: RX7 flywheels use 5/8" screws

#### HS 9587M

(4) ½" flat head socket screws & (4) 5/8" flat head socket screws

**AASCO MOTORSPORTS REPLACEABLE HEAT SHIELD LIST**

HEAT SHEILDS	O.D./I.D.	# of Holes
HS-6529	4.5" racing	8
HS-6536	5.5" racing	8
HS-7450	7.36"x5"	16
HS-7365	7.36"x5" .250" thick	16
HS-8050	8"x5"	16
HS-8350	8.36"x5"	16
HS-8375	8.36"x5.75"	16
HS-8560	8.5"x6"	16
HS-8750	8.75"x5.75"	12
HS-9057	9"x5.75"	12
HS-9565	9.5"x6.5"	12
HS-9587	9.5"x5.75"	12
HS-9587M	9.5"x5.75"	8
HS-9587T	9.5"x6" *see note	12
HS-1050	10"x5.75"	12
HS-1060	10"x6"	12
HS-1160	11"x6.2"	18
HS-1260	12x"6.2"	18

Aasco Heat Shields are Heat Treated for added strength & durability. Measure the inside and out side diameter of your friction surface and determine which Heat Shield you need. All hardware is supplied  
Torque specs: 72 lb/in (always use a thread locking compound)

\* Specify if for Porsche applications as it requires specialty hardware

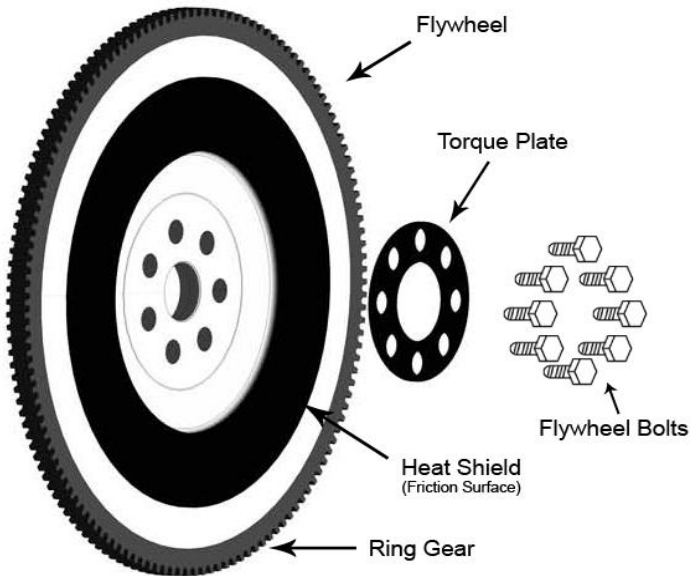
**TROUBLE SHOOTING TIPS****CLUTCH INGAGING INCORRECTLY**

1. Clutch linkage not properly adjusted.
2. Flywheel Heat Shield not replaced before new clutch Installed.
3. Flywheel surface worn or incorrectly installed.
4. Linkage needs adjusting or replacement.
5. Hydraulics defective, power bleeding system may be necessary.
6. Cable stretched or damaged.
7. Clutch disc installed improperly.
8. Clutch disc hub rubbing against flywheel bolts.
9. Clutch disc binding on input shaft.
10. Input shaft bent.
11. Pressure plate or clutch disc bent or damaged.
12. Clutch disc is too thick or to thin.
13. Pressure plate has bent or damaged drive straps.
14. Grease, oil or hydraulic fluid on clutch.
15. Worn release bearing guide tube.

## CLUTCH SLIPPING

1. Improper clutch adjustment.
2. Incorrect clutch release bearing.
3. Grease, oil or hydraulic fluid on clutch.
4. Flywheel Heat Shield not replaced before new clutch Installed.
5. Incorrect clutch assembly for the application.
6. Clutch worn needs replacing.
7. Release bearing or guide tube

### Basic Flywheel Assembly Illustration



#### **IMPORTANT: STREET PERFORMANCE AND RACING VEHICLE**

Inspection of the flywheel and clutch must be a part of your regular maintenance after every period of regular usage.

Please see warranty information regarding this type of use of your Aasco products.