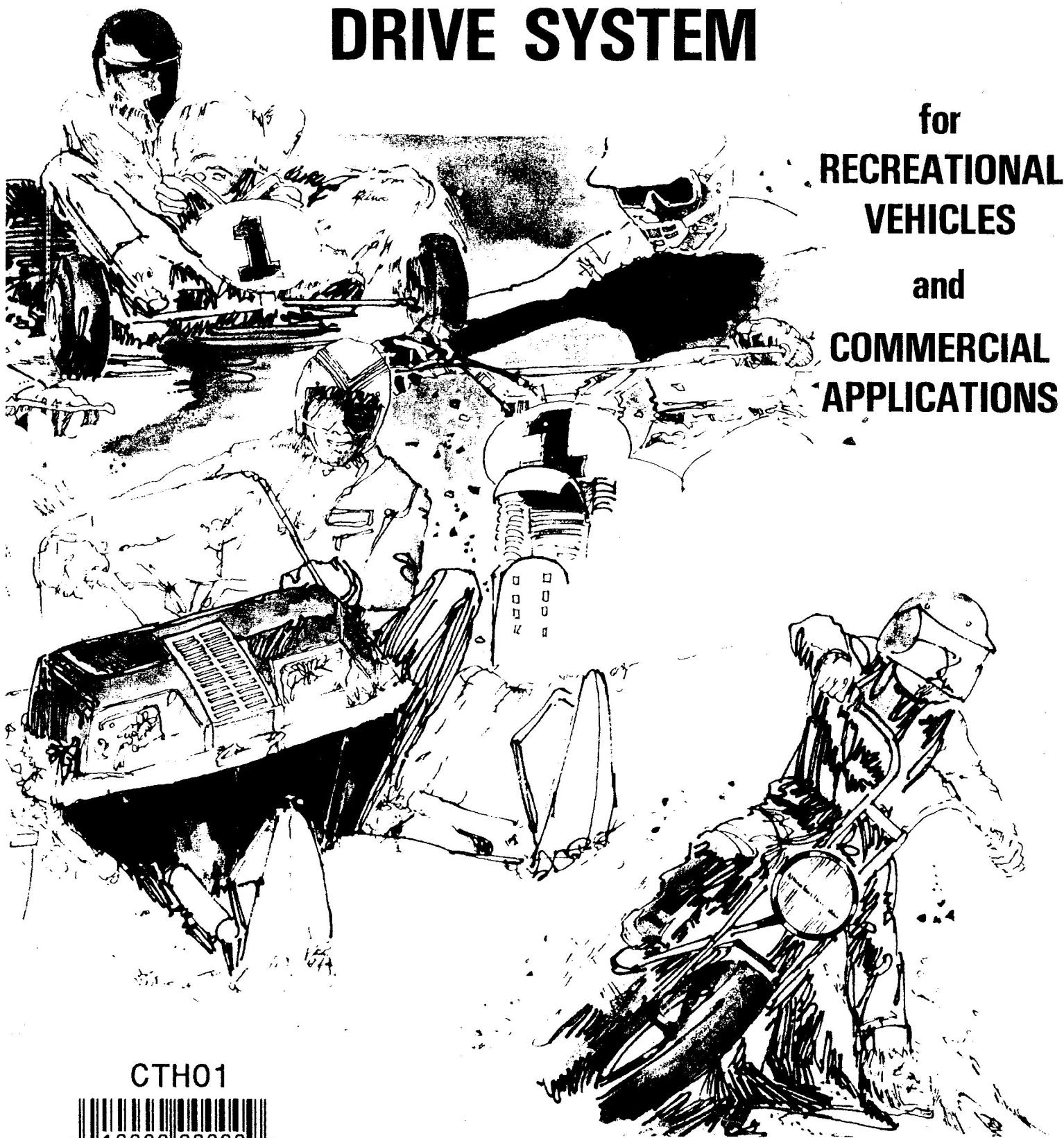


UNDERSTANDING YOUR COMET C.V.T. (CONTINUOUSLY VARIABLE TRANSMISSION) DRIVE SYSTEM

for
**RECREATIONAL
VEHICLES**
and
**COMMERCIAL
APPLICATIONS**



CTH01



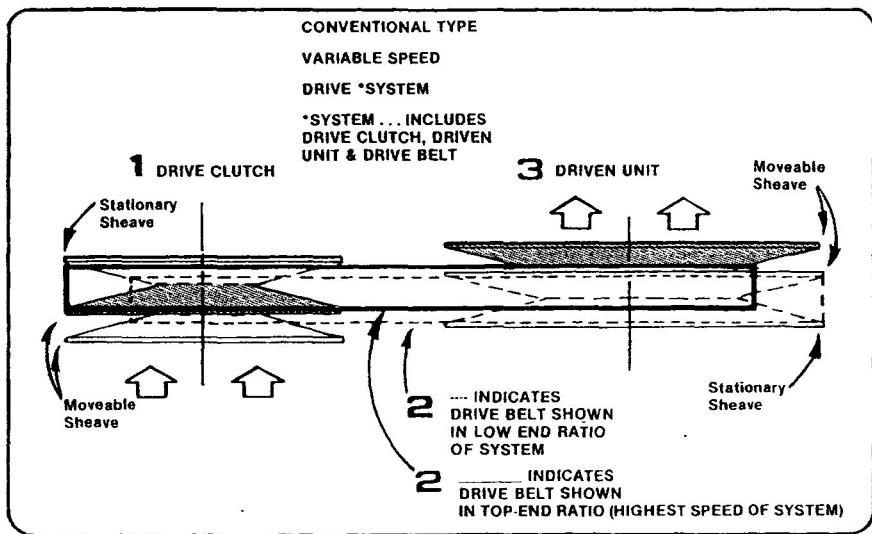
understanding your C.V.T. (Continuously Variable Transmission) Drive System

How much do you know about your drive system? Does the mere mention of sheaves, low end ratios, pitch diameters, or collective angles send your head spinning? Don't feel bad. A lot of people are in the dark about this vitally important component of their R.V., even some sales and service people.

But R.V. drive systems needn't be all that confusing. The system is a basically simple one that has attained a degree of sophistication since the development of R.V.'s. And, because of the sophistication of drive systems, transmissions, torque converters, clutches, whatever they may be called, it is important to know the basics. A properly functioning and cared-for drive system will provide the performance you paid for in your R.V. But lack of proper understanding and maintenance could lead to very disappointing performance from a very fine machine, and also to unnecessary cost and trouble.

What It Is

The basic operating principles of the variable speed drive system of the type used in many R.V.'s are shown in the accompanying illustration. The variable speed drive system normally consists of an engine clutch (1), and a driven unit (3), connected into a system by a "V" type belt (2). The engine clutch is activated by centrifugal force, and the driven unit is torque sensitive,



meaning it is responsive to the torque demand of the driven shaft or jackshaft, to adjust the ratio of the system for the power required according to the various conditions.

Both the clutch and the driven units are composed of pulleys with moveable sheaves. The moveable sheaves allow for the pitch diameter, offering infinitely variable power ranges.

How It Works

The drive clutch (1) is activated by centrifugal force from the engine crankshaft. The moveable sheave of the clutch is forced in (as shown) as the rpm of the engine is increased. This contacts the drive belt (2). The drive belt will then be forced to a larger diameter within the clutch sheaves, thus pulling it to a smaller diameter within the driven unit (3) sheaves. The moveable sheave of the driven unit is (3) forced out, as shown, allowing the belt to seek its smaller, high speed ratio diameter. As this happens, the speed from the engine trans-

ferred to the final drive is increased.

The illustrations show the variable speed drive system in the extreme low position (broken lines — 2) and the extreme high position (solid lines — 2). The system is infinitely variable between low and high ends.

Proper Alignment

Keys to proper operation of the drive system are that the

entire system be aligned and adjusted properly. Vital factors in this proper alignment are (1) that the engine crankshaft and drive shaft (jackshaft) be aligned perfectly parallel; (2) that the drive clutch be aligned to have the belt run at its highest speed; (3) that the driven unit sheaves open to the proper dimension for the highest speed range, which is assured by using a belt of the proper width and with the proper collective angles; (4) that the center distance between engine crankshaft and driven shaft be correct for the drive belt as specified; and (5) that the drive belt have the correct outside circumference and proper top width.

Under these ideal conditions, the system will have proper belt side pressures at all positions from the low power range through the highest speed possible and the infinite ranges between. This means positive engagement at all ratio levels and minimum wear on belt, clutch or driven unit. Providing the internal mechanism of the clutch and driven unit are in good shape, the

action of the drive system, and the R.V., should be smooth and accurate in their response at all times.

Proper Belt Selection

However, there are some common problems that often do not provide or allow for that ideal operation of the drive system and the vehicle. Most of these center on the belt. Care must be taken that the drive belt is the proper length and width, and with the proper collective angle specified for the drive system. If the belt is too short, a number of things can happen that will rob the drive system of its efficiency, including too much friction, wearing out the belt, and not being able to attain the highest speed ratio. A belt too short can easily damage not only the belt itself, but also the drive system.

If the belt is too long, it will also cause loss of efficient operation. With a belt that is too long, the drive system loses its low end power ratios due to belt slippage and its high end ratios because the belt cannot be pulled down into high speed pitch diameters. The belt that is too long will run out of line at the higher engine rpm's. However, too long is the lesser of the two evils with belt lengths, since it creates less danger to the belt or the drive system.

Must Be Parallel

The worst thing that can happen to a drive system is that the crankshaft and driven shaft not be parallel. If not parallel, the belt will be pulled to the side of the sheave face, creating uneven and damaging side pressures. This will not let the belt or the system attain either its proper low end or high speed power range. When not parallel, the system will be erratic in its operation from engagement through the highest speed. Belts will wear very rapidly, and the uneven wear pressures will in many cases cause severe wear and damage to the clutch assembly. The damage caused by this can be likened to that created by a bent crankshaft.

The best way to be sure your drive system is properly aligned is to check your drive belt. If there is uneven wear, or fraying edges, it likely means that the system is not properly aligned. Most dealers will be able to properly adjust your system or read your owner's manual for proper adjustment.

It is also necessary to have your drive system lubricated. But, according

to most drive system experts, the tendency of most owners is to over-lubricate. It should not be necessary to lubricate your clutch assembly more than once per season. It would be perhaps best advised to have your dealer lubricate it before the season and then to not add any lubrication unless the machine is being driven extremely hard.

Drive Belts

An integral part of the drive system that likely is familiar to most is the drive belt. And it is a vital part, and one that must be understood and used properly for efficient operation of the drive system.

As mentioned earlier, the drive belt must be of the proper length and width to match the drive system, and must have the correct angle for maximum efficiency.

Drive system manufacturers are quick to point out that drive belts today are not elastic, and should not be viewed as a rubber band. With the sophistication of drive belts and drive systems found in today's machines, the drive belt can do much damage to the entire system if the proper belt is not used, or the drive system is not properly aligned and adjusted.

In earlier years, the drive system was considered a part of the machine that merely blew a lot of belts. And many belts then were of the variety that if the drive system was not properly aligned or adjusted, the belt would stretch and in most cases disintegrate before doing much damage to the clutch or driven unit.

Today, however, emphasize belt and drive system manufacturers, drive belts have attained such sophistication that if the drive system is not properly aligned or adjusted, or if the wrong belt is used, the belt may tear up the drive system before stretching or breaking.

For that reason alone, and to eliminate the expense, trouble and possible safety hazard, of blown belts or damaged clutches, the drive system on your vehicle should be given extra care to be sure it is operating properly.

Basic guidelines are that the belt be checked periodically for uneven wear, follow specifications and directions in your owners manual, and if any irregularities appear in the system or on the belt, have the system adjusted immediately.

DRIVE SYSTEM TERMS

COLLECTIVE ANGLE — The sum of the two sheave face angles. For example, if each sheave has a 13° angle on the face, the collective angle is 26°.

DRIVEN UNIT — The driven pulley member of the variable speed drive system located on the driven shaft, also called the jack-shaft.

DRIVER — The drive clutch.

FINAL DRIVE — On most vehicles this is a chain drive from the sprocket on the driven shaft to the sprocket on the track or wheel assembly.

JACKSHAFT — Also referred to as driven shaft. The driven unit and final drive sprocket assembly for driving the track are located on this shaft. Brake assemblies are also mounted on this shaft on some machines.

PITCH DIAMETER — The diameter of pulley at the point where center of belt sides have most friction ability for driving. The minimum pitch diameter is the smallest diameter of pulley's ability; maximum is largest diameter of pulley's driving ability.

RATIO — The relationship between the number of times the drive clutch revolves to the revolutions of the driven unit. Low End Ratio is the ratio between the drive clutch and driven unit when drive clutch is at its smallest pitch diameter and driven unit at its largest. High End Ratio refers to the opposite pitch diameters of the drive clutch and driven unit.

SECONDARY CLUTCH — Term sometimes used to describe the driven unit of a variable speed drive system.

SHEAVES — The pulley faces. Two sheaves form a pulley. Moveable sheave is the pulley face that is moved in and out to create different pitch diameters for drive belt. Both drive clutch and driven unit have moveable sheaves. Stationary sheave is pulley face that remains in place as moveable sheave changes position to create various pitch diameters.

TORQUE SENSING — Most driven units are torque sensing. They have a spring loaded cam that will respond to the torque load demand of the driven shaft to adjust the ratio of the system for the power required.



358 NW F Street Richmond, IN 47374-2297
(765) 966-8161 Fax: (765) 935-2346
1-800-999-8161 http://www.hoffcocomet.com
e-mail:aftsales@hoffcocomet.com



SAFETY
SYMBOL

IMPORTANT MESSAGE

THIS SYMBOL OF SAFETY WILL ALERT YOU TO THE POSSIBILITY OF DANGER. CAREFULLY READ EACH MESSAGE THAT FOLLOWS THE SAFETY SYMBOL.

CALIBRATION GUIDE

102C — 108C — 108EXP — 108 4-PRO*

NOTE: If your sled is not listed herein, it probably uses one of the Special 102C's which are Pre-Calibrated by Comet Industries (contact your Dealer or Comet Industries concerning your sled).

Included in this Guide is a partial listing of **KNOWN, REASONABLE, CALIBRATIONS** for Models **102C-108C-108 EXP**. If your sled is not listed, please contact Comet Industries or your Dealer for help.

* FOR 108 4-PRO, ADD WEIGHT OF 3 CAM ARMS USED IN EXP OR OTHER 3 POST CLUTCH, PLUS 14% AND DIVIDED BY 4. THIS IS NEW CAM ARM WEIGHT FOR THE 4-PRO.

The Calibrations in this guide are in no way the **ULTIMATE FOR ALL** applications! They are general for **TRAIL RIDING**, not RACING. For RACING APPLICATIONS, contact your Dealer or Comet Industries to put you in touch with a Hi-Performance Shop.

Calibrations on list are not HIGH ALTITUDE (above 4,000 ft.) unless noted.

NOTE: WARRANTY DISCLAIMER BELOW, CONCERNING RACING APPLICATIONS

THIS CALIBRATION GUIDE IS INTENDED FOR USE IN CONJUNCTION WITH LITERATURE NO. 161004A — INSTALLATION INSTRUCTIONS FOR ARMS AND SPRING ON COMET 102C - 108 - 108 EXP.

CAUTION! To replace Cam Arms and Spring, use care when disassembling Cover - hold cover in place until all bolts are removed, then gradually ease cover off. See Page 3, Step #4 of Literature #161004A.

INSTALLATION TO BE PERFORMED BY AUTHORIZED COMET DISTRIBUTORS OR DEALERS ONLY.

READ INSTRUCTIONS IN LITERATURE #161004A CAREFULLY! FAILURE TO COMPLY WITH THE PROCEDURES WILL VOID WARRANTY.

DANGER! DON'T OPERATE ENGINE ABOVE 9,000 R.P.M. NEVER OPERATE ENGINE WITHOUT BELT AND BELT GUARD IN PLACE. RACING APPLICATIONS AND/OR DISREGARD OF WARNINGS WILL RESULT IN TOTAL DISCLAIMER OF WARRANTY OR ANY OTHER LIABILITY BY COMET INDUSTRIES.

LOC NUTS MUST NOT BE REAPPLIED FOR A THIRD TIME. ALWAYS REPLACE AFTER USE IN TWO INSTALLATIONS. ORDERING INFORMATION ON PAGE 2 OF LITERATURE #161004A.

ARCTIC CAT				PAGE 1				
MODEL	CC	YEAR	108/102	4 PRO	ARM	P/N	SPRING	P/N
CHEETAH	340	72	212600A		F-2	211333A1	BLK	204115A
CHEETAH	400	72-73	212600A		F-2	211333A1	BLK	204115A
CHEETAH	440	72-73	212600A		F-2	211333A1	BLK	204115A
CHEETAH 295	294	75	212600A		K-1	209011A1	BLK	204115A
CHEETAH 340	340	72-75	212600A		F-2	211333A1	WHT	203474A
CHEETAH 440	436	74-75	212600A		K-1	209011A1	WHT	203474A
CHEETAH 4000	434	76	212600A		F-2	211333A1	PNK	203473A
CHEETAH 5000T	500	76-78	212600A		K-1	209011A1	PNK	203473A
CHEETAH L/C	529	88	217500A	217600A	A-2	208221A1	WHT	203474A
CHEETAH TOURING	500	88-93	217500A	217600A	A-2	208221A1	BLU/RED	209833A
+COUGAR	500	89-93	217500A	217600A	A-8	212820A1	YEL/GRN	208228A
COUGAR	500	85-90	217500A	217600A	A-1	207689A1	SIL	204818A
COUGAR	440	91-95	217500A	217600A	A-1	207689A1	PUR	207888A
+COUGAR	440	93-95	217500A	217600A	A-11	213400A1	RED	207877A
COUGAR (MT.CAT)	550	95-98	217500A	217600A	A-15	214255A1	YEL/GRN	208228A
EL TIGRE	250	73-74	212600A		C-2	208968A1	SIL	204818A
EL TIGRE	340	73-75	212600A		C-2	208968A1	PURPLE	207888A
EL TIGRE	400	73-74	212600A		B-1	207801A1	WHT	202467A
EL TIGRE	440	73-76	212600A		B-1	207801A1	WHT	202467A
EL TIGRE 4000	440	76-77	212600A		K-1	209011A1	BLK	204115A
♦EL TIGRE 5000	500	76-80	212600A		A-1	207689A1	SIL	204818A
♦SECONDARY #12 30 DEGREE CAM								
EL TIGRE 5000	435	87/88	217500A	217600A	A-13	213867A1	RED	207877A
+EL TIGRE 5000	500	81	217500A	217600A	K-2	213337A1	SIL	204818A
EL TIGRE 5000	500	81	217500A	217600A	F-2	211333A1	BLK	204115A
EL TIGRE 6000	529	87-89	217500A	217600A	A-12	213864A1	RED	207877A
+EL TIGRE 6000	500	81	217500A	217600A	A-1	207689A1	RED	207877A
EL TIGRE 6000	500	80-85	217500A	217600A	A-2	208221A1	YEL/GRN	208228A
EL TIGRE 6000	440	78-79	212600A		A-13	208968A1	RED	207877A
+EXT	529	89-93	217500A	217600A	A-12	213864A1	YEL/GRN	208228A
EXT 580/EFI/MC	580	94-97	217500A	217600A	A-25	216087A1	RED	207877A
EXT 600	599	98	217500A	217600A				
EXT-SPC/MC	529	89-93	217500A	217600A	A-15	214255A1	RED	207877A
EXT DLX/EFI	580	98	217500A	217600A	A-25	216087A1	RED	207877A
FIRECAT F 5	499	03 04	217500A		A-2	208221A1	YEL/GRM	208228A
FIRECAT F 6	599	04						
FIRECAT F 7	698	03 04	219508A					
JAG AFS	431	89-93	217500A	217600A	A-1	207689A1	SIL	204818A
JAG LT	431	92-93	217500A		A-5	212639A1	SIL	204818A
JAG SPCL/DELUXE/Z	440	92-99	217500A	217600A	A-1	207689A1	RED	207877A
JAG 340/340 MC	339	88-99	217500A	217600A	A-9	213370A1	WHT	203474A
JAG 440	431	88	217500A	217600A	A-5	212639A1	WHT	203474A
JAG 2000	275	76-78	212600A		K-1	209011A1	PNK	203473A
JAG 3000	340	76-80	212600A		K-1	209011A1	BLK	204115A
JAG 4000	431	80-81	212600A		F-2	211333A1	BLK	204115A
SUPER JAG	431	88-93	217500A	217600A	A-1	207689A1	WHT	203474A
KITTY CAT	60	ALL		209748A			CENTRIFUGA	4 INCH
LYNX	292	71-73	212600A		K-1	209011A1	PNK	203473A
LYNX	295	71	212600A		F-2	211333A1	BLK	204115A

ARCTIC CAT				PAGE 2				
MODEL	CC	YEAR	108/102	4 PRO	ARM	P/N	SPRING	P/N
LYNX II	340	74	212600A		F-2	211333A1	BLK	204115A
LYNX II	440	74	212600A		K-1	209011A1	BLK	204115A
LYNX 250	246	75	212600A		K-1	209011A1	PNK	203473A
LYNX 2000S	250	77-80	212600A		K-1	209011A1	PNK	203473A
LYNX 2000T	275	77-80	212600A		K-1	209011A1	PNK	203473A
LYNX DELUXE	339	92-93	217500A	217600A	A-9	213370A1	SIL	204818A
LYNX-MC	339	92-93	217500A	217600A	A-9	213370A1	SIL	204818A
MT CAT 1000	999	01/02	217500A	217600A	AC	215218A1	YEL/GRN	208228A
MT CAT 900	862	03 04	219508A		A54	214651A1	RED	207877A
MT CAT 800	785	01/02	217500A	217600A	A54	214651A1	PUR	207758A
MT CAT 800	785	03 04	219508A		A54	214651A1	PUR	207758A
MT CAT 600	599	03 04	217500A	217600A	A25	216089A1	RED	207877A
MT CAT 500	497	01/03	217500A	217600A	A-2	208221A1	YEL/GRN	208228A
MT CAT 570	565	03 04	217500A		A25	216087A1	PUR	207888A
MT CAT 370	367	01	217500A		A12	213864A1	PUR	207888A
PANTHER	340	71-74	212600A		F-2	211333A1	BLK	204115A
PANTHER	400	72-73	212600A		F-2	211333A1	BLK	204115A
PANTHER (MT CAT)	440	89-96	217500A	217600A	A-9	213370A1	SIL	204818A
PANTHER	440	71-75	212600A		F-2	211333A1	BLK	204115A
PANTHER	634	71	212600A		F-2	211333A1	BLK	204115A
PANTHER	760	70	212600A		K-1	209011A1	PNK	203473A
PANTHER DELUXE	400	94-95	212600A		A-1	207689A1	RED	207877A
PANTHER TWIN	340	71	212600A		F-2	211333A1	BLK	204115A
PANTHER	431	98-01	217500A	217600A	A-1	207689A1	WHT	203474A
PANTHER	550	98/03	217500A	217600A	A-15	214255A1	YEL/GRN	208228A
PANTHER ESR 570	565	03 04	217500A	217600A	A15	214255A1	RED	207877A
PANTHER 400	399	71	212600A		F-2	211333A1	BLK	204115A
PANTHER 4000	434	76-84	212600A		K-1	209011A1	BLK	204115A
+PANTERA 5000	500	76-81	212600A		C-2	208968A1	PURPLE	207888A
PANTHER 5000T	500	76-79	212600A		F-2	211333A1	PNK	203473A
PANTERA	435	76-92	217500A	217600A	A-17	215149A1	RED	207877A
PANTERA	550	93/4/02-04	217500A	217600A	A-2	208221A1	YEL/GRN	208228A
PANTERA	580	95-97	217500A	217600A	A-15	214255A1	RED	207877A
PANTERA	580	99-01	217500A	217600A	A-25	216087A1	RED	207877A
PANTHER 440	431	02	217500A	217600A	A-1	207689A1	SIL	204818A
PANTERA 600	599	03	217500A	217600A	A-25	216087A1	RED	207877A
PANTERA TOUR	600	99	217500A	217600A	A-25	216087A1	RED	207877A
PANTERA	794	98-99	217500A	217600A	A-23	216061A1	RED	207877A
PANTERA 800 EFI	785	02	217500A	217600A	A-54	214651A1	PUR	207758A
PANTERA 800 EFI	785	03 04	219508A		A-54	214651A1	PUR	207758A
PANTERA 1000	999	00-01	217500A	217600A	AC	215218A1	YEL/GRN	208228A
PROWLER	440	90-93	217500A	217600A	A-2	208221A1	YEL/GRN	208228A
PROWLER (2 UP)	440	95-95	217500A	217600A	A-15	214255A1	RED	207877A
PROWLER SPCL	436	92	217500A	217600A	A-19	215407A1	YEL/GRN	208228A
POWDER SPCL	580	95/97	217500A	217600A	A-25	216087A1	RED	207877A
POWDER SPCL	599	98-99	217500A	217600A	A-25	216087A1	RED	207877A
POWDER SPCL 500	497	99-00	217500A	217600A	A2	208221A1	YEL/GRN	208228A
POWDER SPCL 600	599	01	217500A	217600A	A-25	216087A1	RED	207877A
POWDER SPCL 700	700	99-00	217500A	217600A	A-54	214651A1	PUR	207758A
POWDER EXTREME	594	98	217500A	217600A	A-25	216087A1	RED	207877A

ARCTIC CAT				PAGE 3				
MODEL	CC	YEAR	108/102	4 PRO	ARM	P/N	SPRING	P/N
PUMA DLX	340	94-97	217500A	217600A	A-1	207689A1	SIL/BLK	209696A
SABERCAT 500 LX	499	04	217500A					
SABERCAT 600 LX EFI	599	04	219508A					
SABERCAT 700EFI EXT	698	04	219508A					
THUNDERCAT	900	94-96	217500A	217600A	A-54	214651A1	SIL	204818A
THUNDERCAT	999	98-02	217500A	217600A	AC	215218A1	YEL/GRN	208228A
TRAIL CAT 3000	340	79-80	212600A		K-1	209011A1	PNK	203473A
TRAIL CAT 4000	431	80-81	212600A		K-1	209011A1	WHT	203474A
TRIPLE TOURING 600	594	99-01	217500A	217600A	A-25	216087A1	RED	207877A
WILD CAT/EFI		88-96	217500A	217600A	A-18	215400A1	RED	207877A
Z	250	76	212600A		AB-2	208457A1	YEL/RED	208457A1
					GRIND SIDES OFF TO A WEIGHT OF 33 GRAMS			
Z370 ES LX	370	99-02-04	217500A	217600A	A12	213864A1	PUR	207888A
Z440	440	94-97	217500A	217600A	A-1	207689A1	RED	207877A
Z440 ESR LX	431	96-02-04	217500A	217600A	A-1	207689A1	SIL	204818A
Z570 EST LX	565	03 04	217500A	217600A	A15	214255A1	RED	207877A
ZR440	440	94-99	217500A	217600A	A-22	215867A1	SIL	204818A
ZR500	497	98-02	217500A	217600A	A-2	208221A1	YEL/GRN	208228A
ZR580	580	94-97	217500A	217600A	A-25	216087A1	RED	207877A
ZR600 EFI	599	98-02	217500A	217600A	A-25	216087A1	RED	207877A
ZR700	699	99	217500A	217600A	A-54	214651A1	PUR	207758A
ZR800 EFI	785	01	217500A	217600A	A54	214651A1	PUR	207758A
ZR 800 EFI	785	02 / 03	219508A		A54	214651A1	PUR	207758A
ZR 900	862	03 04	219508A		A54	214651A1	RED	207877A
ZRT600	600	96-02	217500A	217600A	A-25	216087A1	RED	207877A
ZR700/EFI	700	94-95	217500A	217600A	A-54	214651A1	RED	207877A
ZRT800	800	95-01	217500A	217600A	A-23	216061A1	RED	207877A
ZL440	436	97-00	217500A	217600A	A-1	207689A1	RED	207877A
ZL500 EFI	497	98-02	217500A	217600A	A-2	208221A1	YEL/GRN	208228A
ZL550 esr	550	00-02-03	217500A	217600A	A-2	208221A1	YEL/GRN	208228A
ZL580	580	0	217500A	217600A	A-25	216087A1	RED	207877A
ZL600 EFI SS ESR	599	99-02-03	217500A	217600A	A-25	216087A1	RED	207877A
ZL700	700	0	217500A	217600A	A-54	214651A1	RED	207877A
ZL800	785	1	217500A	217600A	A54	214651A1	PUR	207758A
ZL800 EFI SS ESR	785	03	219508A		A54	214651A1	RED	207877A
4 CYCLE TRAIL / TOURIN	658	02/03	217500A					
BOMBARDIER								
MODEL	CC	Year	108/102	4 PRO	ARM	P/N	SPRING	P/N
775	771	71	217500A		F-2	211333A1	WHT	203474A
ALPINE	497/503	86-91/94-95	217504A		A-1	207689A1	PNK	203473A
BLIZZARD 9700	534	83-84	217504A		A-2	208221A1	YEL/GRN	208228A
BLIZZARD 5500	496	79-84	208303A		F-2	211333A1	SIL	204818A
BLIZZARD 6500	339	78	208302A		C-2	208968A1	SIL	204818A
BLIZZARD 7500	339	78-81	208302A		C-2	208968A1	PURPLE	207888A
BLIZZARD 9500	436	79-82	208302A		D	203088A1	PURPLE	207888A
CROSS CNTRY RV	340	77-78	208302A		B-1	207801A1	PURPLE	207888A
ELITE 444 RV	444	78-81	208302A		F-2	211333A1	SIL/BLK	209696A
ELITE 464 RV	462	81-83	208302A		K-1	209011A1	WHITE	203474A
ESCAPEADE	503	88-89	217504A	217604A	A-1	207689A1	SIL	204818A

BOMBARDIER				Page 4				
MODEL	CC	Year	108/102	4 PRO	ARM	P/N	SPRING	P/N
EVEREST 340	339	77-79	208303A		F-2	211333A1	SIL/BLK	209696A
EVEREST 440	436	78-79	208303A		F-2	211333A1	SIL/BLK	209696A
EVEREST 440SM	437	74-75	209003A (OBS)		F-2	211333A1	SIL/BLK	209696A
EVEREST 444	436	78-79	208302A		B-1	207801A1	BLACK	204115A
EVEREST 464 RV	462	82	208302A		F-2	211333A1	SIL	204818A
EVEREST 500	496	80-83	208303A		K-2	213337A1	SIL	204818A
FORMULA 380 DLX	368	99-00	217503A		A-1	207689A1	BLACK	204115A
FORMULA 500	499	97	217507A	217607A	A-1	207689A1	SIL	204818A
FORMULA 500 (DLX)	494	98	217507A	217607A	A-1	207689A1	SIL	204818A
FORMULA 500 DLX	497	99-00	217507A	217607A	A-1	207689A1	SIL	204818A
FORMULA 500 (DLX LC)	499	99-00	217507A	217607A	A-1	207689A1	SIL/BLK	209696A
FORMULA 580	580	99	217504A	217604A	A-2	208221A1	YEL/GRN	208228A
FORMULA 583 (DLX)	583	98-99	217504A	217604A	AC	215218A1	PUR	207758A
FORMULA 670 DLX	669	99	217507A	217607A	AC1	215242A1	PUR	207758A
FORM III 600 LT DLX	598	96-00	217507A	217607A	AC-1	215242A1	PUR	207758A
FORMULA III 700 DLX	699	98-00	217507A	217607A	AC	215218A1	PUR	207758A
FORMULA III 800	797	99	217507A	217607A	AC3	215922A1	BLU	202552A
FORMULA LC	499	99	217507A	217607A	A-1	207689A1	SIL	204818A
FORM MACH Z (LT)	773/796	93/03	217507A	217607A	AC-3	215922A1	BLU	202552A
FORMULA MX/MX	463	85-95	217504A	217604A	A-1	207689A1	RED	207877A
FORMULA MX (LT)+	463	85-95	217504A	217604A	A-2	208221A1	YEL/GRN	208228A
FORMULA MX-Z	463	93-95	217504A	217604A	A-1	207689A1	RED	207877A
FORM MX-Z 670	669	97-99	217507A	217607A	AC-1	215242A1	PUR	207758A
FORMULA MX-Z 583	580	96-98	217504A	217604A	A-2	207689A1	YEL/GRN	208228A
FORMULA MX-Z 440	437	95-00	217504A	217604A	A-1	207689A1	RED	207877A
FORMULA MX-Z 440F	437	97	217504A	217604A	A-1	207689A1	RED	207877A
FORM PLUS (EFI)	582	92-93	217504A	217604A	AC	215218A1	PUR	207758A
FORMULA PLUS	537	87/91	217504A	217604A	A-1	207689A1	SIL/BLK	209696A
FORMULA PLUS	521	85-86	217504A	217604A	AC-1	215242A1	SIL/BLK	209696A
FORMULA PLUS X	582	93	217504A	217604A	A-2	208221A1	YEL/GRN	208228A
FORMULA S	368	99-00	217503A	217600A	A-1	207689A1	SIL	204818A
FORMULA S	377	95/98	217504A	217604A	F-2	211333A1	SIL	204818A
FORMULA SL	503	95/99	217504A	217604A	A-1	207689A1	SIL	204818A
FORMULA SS	670	95-96	217507A	217607A	AC-1	215242A1	PUR	207758A
FORMULA SS/SP	463	85-86	217504A	217604A	A-5	212639A1	RED	207877A
FORMULA STX (LT)	583	94-95	217504A	217604A	A-2	208221A1	PUR	207758A
FORMULA Z	580	94-99	217504A	217604A	A-2	208221A1	PUR	207758A
FORMULA Z 500	499		217504A	217604A	A-1	207689A1	SIL	204818A
FORMULA Z 670	670	98-99	217507A	217607A	AC-1	215242A1	PUR	207758A
GRAND TOURING 380	380	03	217503A		A-1	207689A1	SIL	204818A
GRAND TOUR 500	494	96-03	217507A	217607A	AC	215218A1	PUR	207758A
GRAND TOUR 550	550	03						
GRAND TOUR 580	583	96-99	217504A	217604A	AC	215218A1	PUR	207758A
GRAND TOUR 600	598	03	217507A	217607A	AC	215218A1	PUR	207758A
GRAND TOUR 700	699	99-03	217507A	217607A	AC-1	215242A1	PUR	207758A
GRAND TOUR SE	670	94/96	217507A	217607A	AC-1	215242A1	PUR	207758A
GRAND TOUR 800	796	99-03	217507A	217607A	AC	215218A1	PUR	207758A
GRAND TOUR SE	496	97	217504A	217604A	AC	215218A1	RED	207877A
GRAND TOUR SE700	699	98-01	217507A	217607A	AC	215218A1	PUR	207758A
LEGEND 380	380	02/04	217503A		A-1	207689A1	SIL	204818A

BOMBARDIER				PAGE 5				
MODEL	CC	Year	108/102	4 PRO	ARM	P/N	SPRING	P/N
LEGEND 500	500	02/04	217507A	217607A	AC	215218A1	PUR	207758A
LEGEND 550	550	03/04						
LEGEND 600	600	02/04	217507A	217607A	A-1	207689A1	PUR	207758A
LEGEND 700	700	02/04	217507A	217607A	AC	215218A1	BLU	202552A
LEGEND 800	800	02/04	217507A	217607A	AC-1	215242A1	BLU	202552A
LEGEND 1000 4 CYC		03/04						
MACH-1	583	89-90	217504A	217604A	A-2	208221A1	PUR	207758A
MACH-1	617	91-92	217504A	217604A	AC	215218A1	PUR	207758A
MACH-1	670	93-96	217507A	217607A	AC-1	215218A1	PUR	207758A
MACH-1	699	97-99	217507A	217607A	AC	215218A1	PUR	207758A
MX-Z 380	380	03/04	217503A		A-1	207689A1	SIL	204818A
MX-Z 440F	440	01	217503A		A-1	207689A1	SIL	204818A
MX-Z 500	499	98/04	217507A	217607A	AC-1	215242A1	SIL	207758A
MX-Z 550	550	03/04						
MX-Z 600 REV	597	99/04	217507A	217607A	AC-1	215242A1	PUR	207758A
MX-Z 700	698	00/03	217507A	217607A	AC	215218A1	PUR	207758A
MX-Z 800 REV	800	00/04	217507A	217607A	AC-1	215242A1	BLU	202552A
NORDIK 377	368	82-83	208303A		F-2	211333A1	WHT	203474A
RV250	250	76	208303A		Z	207400A1	SIL	204818A
SAFARI377SCOUT-L	377	85-94	217504A	217604A	F-2	211333A1	WHT	203474A
SAFARI 447	436	85-86	217504A	217604A	F-2	211333A1	WHT	203474A
SAFARI LX-LCE-GLX	436/447	90-92	217504A	217604A	F-2	211333A1	WHT	203474A
SAFARI CHY/RALLY	497	93-94	217504A	217604A	A-1	207689A1	SIL	204818A
SAFARI GRAND LUXE	521	85-86	217504A	217604A	F-2	211333A1	SIL/BLK	209696A
SKANDIC/SKANDICII	368	85-87/92-99	217504A	217604A	F-2	211333A1	SIL	204818A
SKANDIC SWT	497	99/03	217503A	217600A	A-1	207689A1	SIL	204818A
SKANDIC WT LC	499	98/03	217507A	217607A	AC-1	215242A1	SIL	204818A
SKANDIC II	497	93-99	217504A	217604A	A-1	207689A1	SIL	204818A
SKANDIC 280	280	04						
SKANDIC 277	268	83	208303A		F-2	211333A1	SIL/BLK	209696A
SKANDIC 380	368	99-00	217503A	217600A	A-1	207689A1	BLK	204115A
SKANDIC TUNDRA	440	03	217503A		A-1	207689A1	RED	207877A
SKANDIC LT	440	02/04	217503A		A-1	207689A1	RED	207877A
SKANDIC 500	499	99/03	217507A	217607A	A-1	207869A1	SIL	204818A
SKANDIC 550 sport suv	550	04						
SKANDIC 600 wt-suv	600	01/04	217507A	217607A	AC	218215A1	RED	207877A
STRATOS	497	88	217504A	217604A	A-1	207689A1	SIL	204818A
SUMMIT 470	470	94	217504A	217604A	A-1	207689A1	SIL	204818A
SUMMIT 500 LC	499	96-02	217507A	217607A	AC	215218A1	PUR	207758A
SUMMIT 500 FC	499	96/02/04	217504A	217604A	AC	215218A1	PUR	207758A
SUMMIT 550	550	03/04						
SUMMIT 583	583	94-98	217504A	217604A	AC	215218A1	PUR	207758A
SUMMIT 600	598	99/04	217507A	217607A	A-1	207689A1	PUR	207758A
SUMMIT 670	669	95-99	217507A	217607A	AC-1	215242A1	PUR	207758A
SUMMIT 700	700	03	217507A	217607A	AC	215218A1	BLU	202552A
SUMMIT 800	800	03/04	217507A	217607A	AC-1	215242A1	BLU	202552A
TNT 340S	339	69/75	209003A(OBS)		C-2	208968A1	PURPLE	207888A
TNT 340	346/339	74-78	208303A		F-2	211333A1	WHT	203474A
TNT 440	438	78	208303A		F-2	211333A1	WHT	203474A
TOURING E	368	99-00	217503A	217600A	A-1	207689A1	BLK	204115A

BOMBARDIER				PAGE 6					
MODEL	CC	Year	108/102	4 PRO	ARM	P/N	SPRING	P/N	
TOURING SLE	497	97-00	217504A	217604A	AC	215218A1	RED	207877A	
TOURING LE	436	97-00	217507A	217607A	AC-1	212542A1	SIL	214818A	
MINI-Z		98-03	209768A		STRAIGHT CENTRIFUGAL CLUTCH				
CHAPARREL	LIQUID	COOLED							
MODEL	CC	Year	108/102	4 PRO	ARM	P/N	SPRING	P/N	
FIREBIRD	292	73-74	212600A		F-2	211333A1	PNK	203473A	
FIREBIRD	338	71-72	212600A		F-2	211333A1	WHT	203474A	
FIREBIRD	340	73-74	212600A		F-2	211333A1	WHT	203474A	
FIREBIRD	400	71-73	212600A		F-2	211333A1	WHT	203474A	
FIREBIRD	440	71/73-74	212600A		C-2	208968A1	BLK	204115A	
*SSX	340	74	212600A		B-1	207801A1	WHT	203474A	
**SSX	432	74	212600A		B-1	207801A1	WHT	203474A	
THUNDERBIRD	340	71/73	212600A		F-2	211333A1	WHT	203474A	
THUNDERBIRD	400	71-72	212600A		B-1	207801A1	WHT	203474A	
THUNDERBIRD	440	71/73	212600A		B-1	207801A1	WHT	203474A	
THUNDERBIRD	493	71-72	212600A		F-2	211333A1	WHT	203474A	
CHAPARREL	LIQUID	COOLED							
*SSX	340	1974	212600A		B	202550A1	WHT	203474A	
*90D Driven 203364A - Wht Spg 203843A - 34° Cam NO LONGER AVAILABLE									
Set Spring in No. 2 Hole - Wrap to Second Cam - Gear 17:36									
**SSX	432	1974	212600A		B	202550A1	WHT	203474A	
**90D Driven 203364A - Wht Spg 203843A - 45° Cam NO LONGER AVAILABLE									
Set Spring in No. 3 Hole - Wrap to Second Cam - Gear 19:36									
JOHN DEERE									
MODEL	CC	Year	108/102	4 PRO	ARM	P/N	SPRING	P/N	
JDX4	292		212600A		F-2	211333A1	WHT	203474A	
JD X 4	339		212600A		F-2	211333A1	WHT	203474A	
JD X 4	339		212600A		F-2	211333A1	WHT	203474A	
JDX 6	399		212600A		F-2	211333A1	WHT	203474A	
JDX 8	438		212600A		F-2	211333A1	WHT	203474A	
JD 500	436		212600A		F-2	211333A1	WHT	203474A	
JD 600	436		212600A		F-2	211333A1	WHT	203474A	
JD 800	438		212600A		F-2	211333A1	WHT	203474A	
LIQUIFIRE 340	340		208306A		F-2	211333A1	SIL	204818A	
LIQUIFIRE 440	438		208306A		F-2	211333A1	BLK	204115A	
+ LIQUIFIRE 440	440		208306A		HE-5	207820A1	GOLD	208175A	
LIQUIFIRE 440	436		208306A		B-1	207801A1	PUR	207888A	
+ LIQUIFIRE 440	440		217505A	217605A	HE-5	207820A1	GOLD	208175A	
LIQUIFIRE 440	436		217505A	217605A	B-1	207801A1	PUR	207888A	
SPORTFIRE 440	436		208306A		U	205169A1	SIL	204818A	
TRAILFIRE 340	339		208306A		R-1	208306A1	SIL	204818A	
TRAILFIRE LX440	436		208306A		B	207801A1	PUR	207888A	
295 S	295		212600A		E	203089A1	WHT	203474A	
340 S	339		208306A		E	203089A1	WHT	203474A	

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KAWASAKI	MODEL	CC	Year	108/102	4 PRO	ARM	P/N	SPRING
DRIFTER	440	79-80		212600A		F-2	211333A1	WHT
INTERCEPTOR	530	82		208306A		A-2	208221A1	PURPLE
INVADER		79		208306A		C-2	208968A1	BLK
INTERCEPTOR	535	82		208306A		B-1	207801A1	GRN/SIL
INTRUDER	440	79		208306A		F-2	211333A1	BLK
INVADER/LTD		80		208306A		HE-4	206995A1	PUR
INVADER		79		208306A		B-1	207801A1	PURPLE
INTRUDER		78		212600A		F-2	211333A1	WHT
LTD	440	86		212600A		B-1	207801A1	WHT
MERCURY								
SNOW TWISTER								
1974 - 212600A - "L" arm 203837A, red spring 205040A. 1 or 2 spring spacers 203849A. Remove 203849A spacers underneath the spider.								
1975 - 212600A - "B - 1" arm 207801A. Remove 1/8" of weight from bottom of tip. Remove 1 - 203150A spacer. Use a yellow spring 203475A.								
1976 - 212600A - "AB - 1" arm 208455A and a gold spring 208175A								
Less Aggressive - "D" arm 203088A, yellow spring 203088A. Both 203150A spacers removed.								
Trail Riding - "B - 1" arm 207801A, yellow spring 203475A. 2 spring spacers 203849A.								
ALL CALIBRATIONS START WITH 212600A AS BOXED.								
MODEL	CC	Year	108/102	4 PRO	ARM	P/N	SPRING	P/N
TRAIL TWISTER			212600A		A-12	213864A1	PUR	207888A
POLARIS								
Polaris calibrations are general and may vary from original. It is permissible to use the original or new Polaris weights and spring								
MODEL	CC	Year	108/102	4 PRO	ARM	P/N	SPRING	P/N
340 CLASSIC	339	03 04	217503A		A-1	207689A1	SILVER	204818A
440 PRO X FAN	438	03	217503A					
500 EFI/SKS	498	95	217503A	217600A	A-1	207689A1	YEL/GRN	208228A
500(RMK)	488	99-02	217503A	217600A	A-1	207689A1	RED	207877A
500 XC (SP)	498	99 / 04	217503A	217600A	A-1	207689A1	YEL/GRN	208228A
500 CLASSIC TOUR	488	89 / 04	217503A	217600A	A-1	207689A1	RED	207877A
550 CLASSIC& prox	544	03 04	217503A	217600A	A-54	214651A1	GOLD	208175A
600 classic & edge	600	00 / 04	217503A	217600A	AC	215218A1	BLU	202552A
600 CLASSIC XC/DLX	593	00 / 04	217503A	217600A	A-2	208221A1	YEL/GRN	208228A
600 SWITCHBACK	599	04	217503A		A-2	208221A1	YEL/GRN	208228A
700 classic tour & edge	700	00 / 04	217503A	217600A	AC	215218A1	BLU	202552A
700 SWITCHBACK	700	04	217503A		AC	215218A1	BLU	202552A
600 XCR	580	95	217503A	217600A	A-2	207689A1	YEL/GRN	208228A
700 SKS.	700	99	217503A	217600A	AC	215218A1	PUR	207758A
800 SKS 1 7/16 belt	794	03	217503A	217600A	AC	215218A1	BLUE	202552A
800 LE	794	00-01	217503A	217600A	AC	215218A1	RED	207877A
800 RMK 1 7/16 belt	794	00 / 04	217503A	217600A	AC	215218A1	BLU	202552A
800 XC SP 1 7/16 belt	794	03	217503A	217600A	AC	215218A1	BLU	202552A
800 XCR 1 7/16 belt	794	99 / 03	217503A	217600A	AC	215218A1	BLUE	202552A
800 PROX 1 7/16 belt	794	03 04	217503A	217600A	AC	215218A1	BLUE	202552A
800 SWITCHBACK	794	04	217503A		AC	215218A1	BLU	202552A
800 classic tour edge	794	04	217503A		AC	215218A1	BLU	202552A
APOLLO	340	79-80	217502A		C-2	208968A1	SIL/RED	209677A
CENTURION	510	79/82	217502A		A-12	213864A1	BLU	202552A
CLASSIC	498	95	217503A	217600A	A-1	207689A1	RED	207877A
COBRA	340	78-79	217502A		F-2	211333A1	SIL/BLK	209696A

POLARIS				PAGE 8				
Polaris calibrations are general and may vary from original. It is permissible to use the original or new Polaris weights and spring								
MODEL	CC	Year	108/102	4 PRO	ARM	P/N	SPRING	P/N
COBRA	440	78-79	217502A		F-2	211333A1	PNK	203473A
COLT	175	76	217502A		N-1	209642A1	ORN	203472A
COLT	250	75-78	217502A		F-2	211333A1	SIL	204818A
COLT	244	76-78	217502A		N-1	209640A1	ORN	203472A
COLT SS	340	75-77	217502A		F-2	211333A1	SIL	204818A
COLT SS	250	77	217502A		F-2	211333A1	SIL	204818A
CUTLASS	340	81	217502A		F-2	211333A1	SIL/RED	209677A
CUTLASS SS	440	81	217502A		A-2	208221A1	BLK	204115A
CUTLASS SS	440	81-82	217503A	217600A	A-2	208221A1	BLK	204115A
ELECTRA	250	75-77	217502A		N-1	209642A1	PNK	203473A
ELECTRA	340	75-77	217502A		N-1	209642A1	PNK	203473A
ELECTRA	440	75-77	217502A		N-1	209642A1	PNK	203473A
FRONT CLASS/TOUR	784	03 04 (4 CYCLE)						
GALAXY	340	80	217502A		F-2	211333A1	SIL/BLK	209696A
GALAXY	440	80-81	217502A		U	205169A1	PNK	203473A
GEMINI	244	79-80	217502A		N-1	209642A1	SIL/RED	209677A
GEMINI	250	79/81	217504A		N-1	209642A1	RED/BLU	209833A
GEMINI	250	83	217502A		C-1	208968A1	PNK	203473A
INDY 340 EDGE	339	03 04	217503A		A1	207689A1	SILVER	204818A
INDY 400	400	85-94	217503A	217600A	A-1	207689A1	PNK	203473A
INDY 440	432	98	217503A	217600A	A-1	207689A1	SILVER	204818A
INDY 440 SKS	440	93-97	217503A	217600A	A-39	217288A1	RED	207877A
INDY 500	488	89 / 04	217503A	217600A	A-20	215575A1	GOLD	208175A
INDY 500 (7000-90000)	488	89-04	217503A		D	203088A1	GOLD	208175A
INDY 600 XCR	600	97-98	217503A	217600A	A-54	214651A1	GOLD	208175A
INDY 600 XC (SP)	597	97 / 04	217503A	217600A	A-2	208221A1	YEL/GRN	208228A
INDY 600	600	83	217502A		A-4	212135A1	YEL/WHT	211361A
INDY 600	600	84-87	217503A		A-1	207689A1	RED	207877A
INDY 600 RMK	593	98 / 04	217503A	217600A	A-2	208221A1	RED	207877A
600 PRO X X2	593	03 04	217503A	217600A	A-1	207689A1	SILVER	204818A
INDY 650/INDY RXL	648	88-97	217503A	217600A	A-54	214651A1	GOLD	208175A
INDY 650/RXL H.A.	650	88/90/91/92/95	217503A	217600A	A-4	212135A1	GOLD	208175A
INDY 700RMK1 7/16 belt	700	98 / 04	217503A	217600A	AC	215218A1	PUR	207758A
INDY 700SKS 1 7/16 belt	700	97 / 03	217503A	217600A	AC	215218A1	PUR	207758A
INDY 700 XC SP 1 7/16 belt	700	98 / 04	217503A	217600A	AC	215218A1	PUR	207758A
INDY 700 XCR 1 7/16 belt	700	98-99	217503A	217600A	AC	215218A1	PUR	207758A
700 PRO X2 1 7/16 belt	700	03 04	217503A	217600A	AC	215218A1	PUR	207758A
INDY C/C	350	83	217503A	217600A	C-2	208968A1	YEL/RED	208238A
INDY CLASSIC TOURING	488	99-01	217503A	217600A	A-1	207689A1	RED	207877A
INDY SPORT/INDY SPT G	340	87-91-93-94	217503A	217600A	A-2	208221A1	SIL/GRN	209935A
INDY SPORT/TOURING	432	97	217503A	217600A	A-1	207689A1	SIL	204818A
INDY STORM	794	93-99	217503A	217600A	AC	215218A1	BLU	202552A
INDY SUPER SPT	446	98-99	217503A		A-1	207689A1	SIL	204818A
INDY SUPER TRAK	488	92	217503A	217600A	A-1	207689A1	SIL	204818A
INDY TRAIL	440	83-85	217503A	217600A	K-2	213337A1	SIL	204818A
INDY TRAIL (DLX)	488	86-99	217503A	217600A	A-4	212135A1	SIL/BLK	209696A
INDY TRAIL RMK/500RM	488	98-01	217503A	217600A	A-1	207689A1	SIL	204818A
INDY TRAIL/TOUR	488	97-99	217503A	217600A	A-1	207689A1	RED	207877A

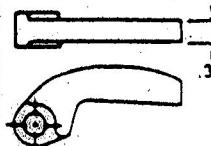
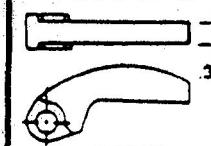
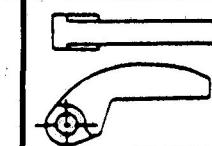
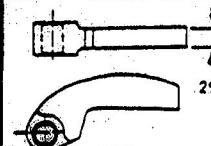
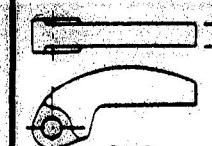
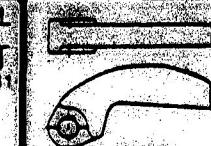
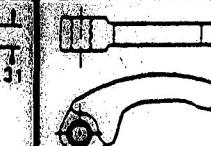
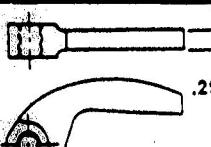
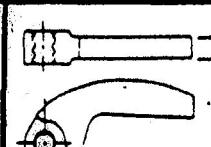
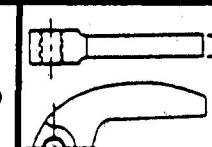
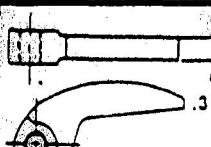
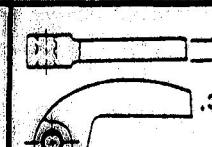
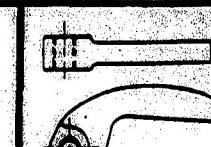
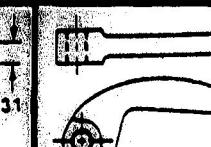
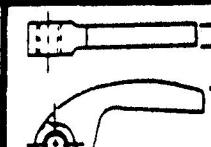
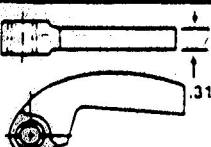
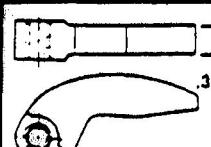
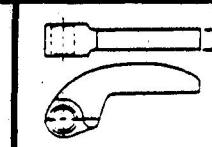
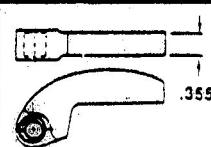
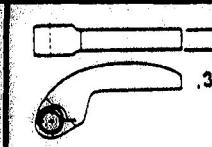
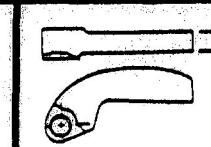
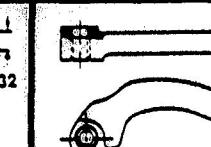
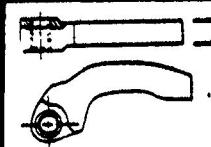
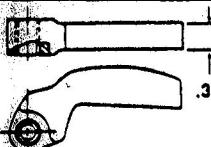
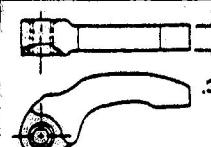
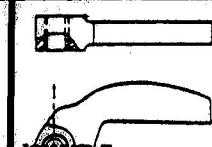
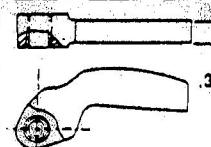
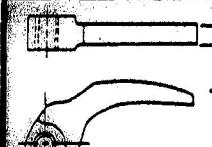
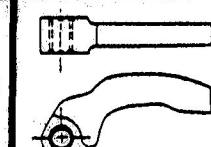
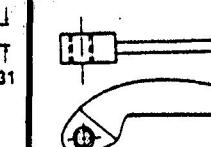
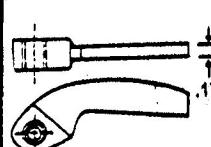
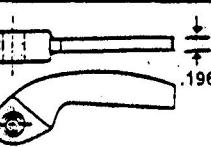
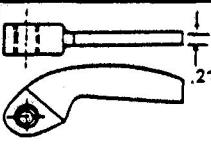
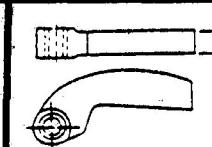
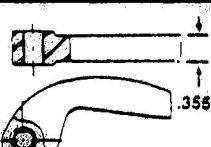
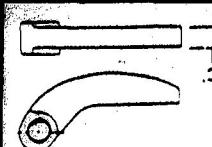
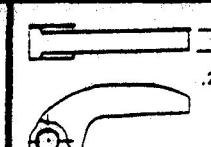
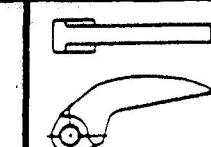
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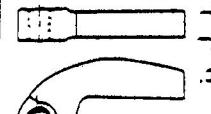
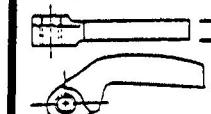
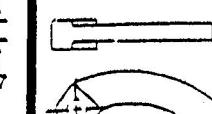
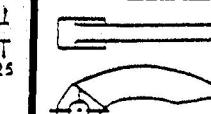
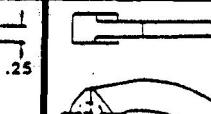
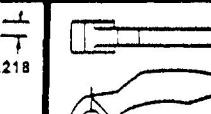
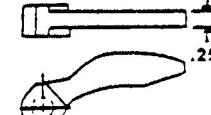
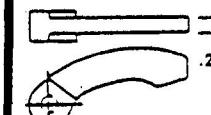
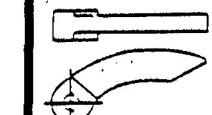
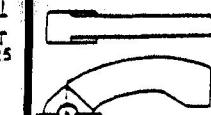
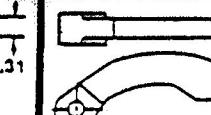
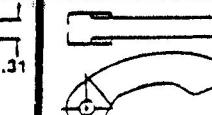
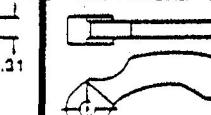
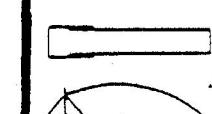
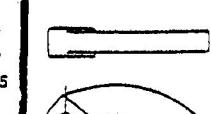
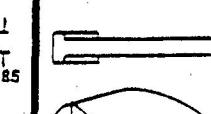
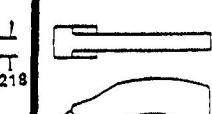
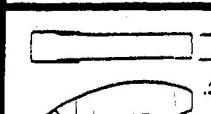
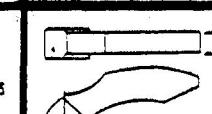
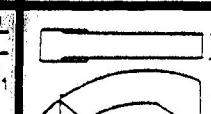
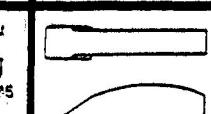
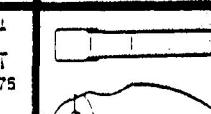
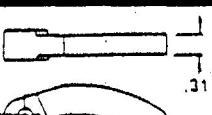
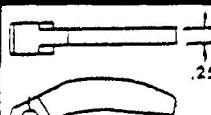
PAGE 9

Polaris calibrations are general and may vary from original. It is permissible to use the original or new Polaris weights and spring

RUPP					PAGE 10			
MODEL	CC	Year	108/102	4 PRO	ARM	P/N	SPRING	P/N
NITRO	F250	77	212600A		D	203088A1	WHT	203474A
	LC	76	212600A		A-14	214172A1	PUR	207888A
SCORPION								
MODEL	CC	Year	108/102	4 PRO	ARM	P/N	SPRING	P/N
SIDEWINDER	440	80	212600A		B-1	207801A1	SIL	204818A
SIDEWINDER	440	81	212600A		A-2	208221A1	YEL/GRN	208228A
S STINGER	290	75	212600A		B-1	207801A1	BLK	204115A
S STINGER	338	75	212600A		B-1	207801A1	BLK	204115A
S STINGER	399	75	212600A		B-1	207801A1	SIL	204818A
S STINGER	428	75	212600A		B-1	207801A1	SIL	204818A
STING 400	399	79	212600A		B-1	207801A1	SIL	204818A
STING 440	428	80	212600A		K-2	213337A1	SIL	204818A
STING 440	428	79	212600A		B-1	207801A1	SIL	204818A
STING 440	428	77	212600A		B-1	207801A1	WHT	203474A
STING 440 PS/PR	428	78	212600A		B-1	207801A1	WHT	203474A
TK 340	339	80	212600A		B-1	207801A1	SIL	204818A
TK 440	428	80	212600A		B-1	207801A1	SIL	204818A
TK 440	428	78	212600A		B-1	207801A1	SIL	204818A
TK 440	428	79	212600A		B-1	207801A1	SIL	204818A
TKX 440	428	79	212600A		B-1	207801A1	SIL	204818A
TKX 440	428	78	212600A		B-1	207801A1	WHT	203474A
WHIP 340	338	75	212600A		F-2	211333A1	SIL	204818A
WHIP 340	339	77	212600A		F-2	211333A1	SIL	204818A
WHIP 340	338	79-80	212600A		B-1	207801A1	SIL	204818A
WHIP 340	338	76	212600A		B-1	207801A1	WHT	203474A
WHIP 340 PR	338	78	212600A		B-1	207801A1	SIL	204818A
WHIP 400	399	75	212600A		B-1	207801A1	WHT	203474A
WHIP 440	428	79-80	212600A		B-1	207801A1	SIL	204818A
WHIP 440 PS/PR	428	78	212600A		B-1	207801A1	WHT	203474A
WHIP SLIDER	428	76	212600A		B-1	207801A1	SIL	204818A
SNO-JET								
MODEL	CC	Year	108/102	4 PRO	ARM	P/N	SPRING	P/N
SST 440	433	75	212600A		C-2	208968A1	PURPLE	207888A
THUNDER JET	433	75	212600A		C-2	208968A1	PURPLE	207888A
WHISPER JET	433	75	212600A		K-2	213337A1	WHT	203474A
SST 440	433	76	212600A		F-2	211333A1	WHT	203474A
ASTRO 340	338	77	212600A		F-2	211333A1	PNK	203473A
YAMAHA								
MODEL	CC	Year	108/102	4 PRO	ARM	P/N	SPRING	P/N
BRAVO LNG TRK	246	97-01	208300A		A-1	207689A1	PNK	203473A
ENTICER ET300	294	78-86	*208301A		F-1	211333A1	PNK	203473A
ENTICER ET340	338	79-84	*208301A		F-2	211333A1	PNK	203473A
ENTICER ET400	410	89-95	*208301A		F-2	211333A1	SIL	207818A
ENTICER 340	337	88	*208301A		A-1	207689A1	WHT	203474A
ENTICER ET340T	338	81-86	*208301A		F-2	211333A1	PNK	203473A
ENTICER 340 DELUXE	338	79-80	*208301A		F-2	211333A1	PNK	203473A
EW 643	643	72-73	*208301A		K-2	211337A1	PNK	203473A
EX 340	338	78	*208301A		F-2	211333A1	WHT	203474A

**COMET
CAM ARMS
AVAILABLE
FOR
102C-108C
108 EXP-108 4-PRO
TORQUE
CONVERTERS
*BUSHING**

 "A-1" CAM ARM PART NO. 207689A1 46.5 GRAMS $\pm .75$	 ORANGE MODIFIED "A-1" CAM ARM PART NO. 209940A1 47.0 GRAMS $\pm .75$	 HUB YELLOW "A-2" CAM ARM PART NO. 208221A1 46.0 GRAMS $\pm .75$	 RED "A-3" CAM ARM PART NO. 208288A1 44.9 GRAMS $\pm .75$	 GOLD "A-4" CAM ARM PART NO. 212135A1 46.7 GRAMS $\pm .75$	 BLUE "A-5" CAM ARM PART NO. 212233A1 46.8 GRAMS $\pm .75$	 "A-6" CAM ARM PART NO. 212821A1 43.8 GRAMS $\pm .75$	
 END YELLOW "A-7" CAM ARM PART NO. 212822A1 42.3 GRAMS $\pm .75$	 END RED "A-8" CAM ARM PART NO. 212820A1 44.0 GRAMS $\pm .75$	 END BLACK "A-9" CAM ARM PART NO. 213370A1 44.8 GRAMS $\pm .75$	 END BROWN "A-10" CAM ARM PART NO. 213371A1 41.3 GRAMS $\pm .75$	 PURPLE "A-11" CAM ARM PART NO. 213400A1 49.0 GRAMS $\pm .75$	 "A-12" CAM ARM PART NO. 213884A1 45.3 GRAMS $\pm .75$	 "A-13" CAM ARM PART NO. 213867A1 43.3 GRAMS $\pm .75$	 "A-14" CAM ARM PART NO. 214172A1 40.3 GRAMS $\pm .75$
 "A-15" CAM ARM PART NO. 214255A1 50.0 GRAMS $\pm .75$	 "A-16" CAM ARM PART NO. 214898A1 50.0 GRAMS $\pm .75$	 "A-17" CAM ARM PART NO. 215149A1 46.5 GRAMS $\pm .75$	 "A-18" CAM ARM PART NO. 215400A1 52.7 GRAMS $\pm .75$	 "A-19" CAM ARM PART NO. 215407A1 46.2 GRAMS $\pm .75$	 "A-20" CAM ARM PART NO. 215575A1 49.2 GRAMS $\pm .75$	 "A-21" CAM ARM PART NO. 215865A1 45.5 GRAMS $\pm .75$	 "A-22" CAM ARM PART NO. 215867A1 48.9 GRAMS $\pm .75$
 "A-23" CAM ARM PART NO. 216081A1 53.5 GRAMS $\pm .75$	 "A-24" CAM ARM PART NO. 216065A1 44.0 GRAMS $\pm .75$	 "A-25" CAM ARM PART NO. 216087A1 49.5 GRAMS $\pm .75$	 "A-26" CAM ARM PART NO. 216059A1 51.5 GRAMS $\pm .75$	 "A-27" CAM ARM PART NO. 216091A1 39.7 GRAMS $\pm .75$	 "A-28" CAM ARM PART NO. 216381A1 46.5 GRAMS $\pm .75$	 "A-35" CAM ARM PART NO. 217282A1 35.3 GRAMS $\pm .75$	 "A-37" CAM ARM PART NO. 217288A1 37.3 GRAMS $\pm .75$
 "A-39" CAM ARM PART NO. 217288A1 39.3 GRAMS $\pm .75$	 "A-41" CAM ARM PART NO. 217291A1 41.3 GRAMS $\pm .75$	 "A-52" CAM ARM PART NO. 214897A1 52.5 GRAMS $\pm .75$	 "A-54" CAM ARM PART NO. 214651A1 54.3 GRAMS $\pm .75$	 GREEN "AA-1" CAM ARM PART NO. 208394A1 44.3 GRAMS $\pm .75$	 WHITE "AA-2" CAM ARM PART NO. 208395A1 43.3 GRAMS $\pm .75$	 SILVER "AB-2" CAM ARM PART NO. 208457A1 47.7 GRAMS $\pm .75$	

 "AC" CAM ARM PART NO. 215218A1 57.2 GRAMS \pm .75	 "AC-1" CAM ARM PART NO. 215242A1 52.3 GRAMS \pm .75	 "AC-3" CAM ARM PART NO. 215922A1 54.3 GRAMS \pm .75	 "B-1" CAM ARM PART NO. 207801A1 46.0 GRAMS \pm .75	 "B-2" CAM ARM PART NO. 208232A1 41.3 GRAMS \pm .75	 "B-3" CAM ARM PART NO. 209431A1 44.7 GRAMS \pm .75	 "B-4" CAM ARM PART NO. 211331A1 42.7 GRAMS \pm .75	 "C1-M" CAM ARM PART NO. 208967A 38.0 GRAMS \pm .75
 "C-2" CAM ARM PART NO. 208968A1 43.7 GRAMS \pm .75	 "C-2M" CAM ARM PART NO. 209403A1 37.8 GRAMS \pm .75	 "D" CAM ARM PART NO. 203088A1 42.8 GRAMS \pm .75	 "E" CAM ARM PART NO. 203089A1 40.0 GRAMS \pm .75	 "F-2" CAM ARM PART NO. 211333A1 54.0 GRAMS \pm .75	 "HE-1" CAM ARM PART NO. 208353A1 51.7 GRAMS \pm .75	 "HE-2" CAM ARM PART NO. 205357A1 54.1 GRAMS \pm .75	 "HE-3" CAM ARM PART NO. 205218A1 45.7 GRAMS \pm .75
 "HE-4" CAM ARM PART NO. 206995A1 55.9 GRAMS \pm .75	 "HE-5" CAM ARM PART NO. 207202A1 45.7 GRAMS \pm .75	 "HE-6" CAM ARM PART NO. 209776A1 56.3 GRAMS \pm .75	 "K-1" CAM ARM PART NO. 209011A1 59.7 GRAMS \pm .75	 "K-2" CAM ARM PART NO. 213337A1 54.0 GRAMS \pm .75	 "L" CAM ARM PART NO. 203837A1 38.6 GRAMS \pm .75	 "N-1" CAM ARM PART NO. 209642A1 45.3 GRAMS \pm .75	 "P-1" CAM ARM PART NO. 209782A1 41.8 GRAMS \pm .75
 "Q" CAM ARM PART NO. 206911A1 56.9 GRAMS \pm .75	 "R" CAM ARM PART NO. 205249A1 59.6 GRAMS \pm .75	 "R-1" CAM ARM PART NO. 207874A1 57.7 GRAMS \pm .75	 "T" CAM ARM PART NO. 205137A1 48.1 GRAMS \pm .75	 "U" CAM ARM PART NO. 205169A1 63.0 GRAMS \pm .75	 "U-1" CAM ARM PART NO. 207753A1 61.5 GRAMS \pm .75	 "W" CAM ARM PART NO. 205257A1 59.5 GRAMS \pm .75	 "X" CAM ARM PART NO. 207220A1 58.7 GRAMS \pm .75
 "X-1" CAM ARM PART NO. 207321A1 49.7 GRAMS \pm .75	 "Z" CAM ARM PART NO. 207400A1 37.1 GRAMS \pm .75	 RED "Z-1" CAM ARM PART NO. 207422A1 40.7 GRAMS \pm .75	 BLUE "Z-2" CAM ARM PART NO. 207439A1 33.4 GRAMS \pm .75				



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<http://www.hoffcocomet.com>

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SPRING LISTING FOR 102C/108C/108 EXP/108 4-PRO

COLOR	SPRING	OUTSIDE DIAMETER OF SPRING	SPRING HEIGHT	WIRE DIA.	NO. OF COILS	POUNDS TENSION WHEN COMPRESSED TO HEIGHT OF:		RATE OF TENSION INCREASE PER ADDITIONAL INCH OF COMPRESSION
						1-1/8"	2-3/8"	
ORANGE	203472A	2"	3"	.156	5-1/2	74	25	40
PINK	203473A	2"	3"	.177	5	142	45	92
BLACK	204115A	2"	3-1/8"	.192	5	198	50	118
BROWN	205040A	2"	2-7/8"	.192	4.4	195	50	116
WHITE	203474A	2"	3-1/8"	.187	5	187	65	100
SILVER/RED	209677A	2.03"	3.11"	.187	5	189	67	97
RED/BLUE	209833A	2.06"	3-1/16"	.207	4-3/4	236	74	129
YELLOW/WHITE	211361A	2.06"	3.0"	.207	5	233	76	123-129
WHITE	202467A	2"	3-3/4"	.177	5-1/2	160	82	62
SILVER	204818A	2"	3-15/32"	.192	5.2	190	85	84
SILVER/BLACK	209696A	2-1/32"	3-23/64"	.192	5-1/2	203	85	91
RED	207877A	2-1/16"	3-1/4"	.207	5-3/8	254	92	130
YELLOW/RED	208238A	2-1/16"	2-29/32"	.207	5	275	93	146
SILVER/GREEN	209935A	2.03"	3.638"	.187	5.7	196	99	78
SILVER/ORANGE	209936A	2.06"	3.07"	.207	5	283	99	142
YELLOW	202551A	2"	4-1/16"	.177	5-1/2	187	100	69
PURPLE	207888A	2"	3-15/32"	.192	5.3	226	106	96
BLUE	202552A	2"	4-7/8"	.177	5-1/2	187	118	55
GOLD	208175A	2"	3-1/2"	.207	6	296	129	123
YELLOW/GREEN	208228A	2"	3-13/32"	.207	5-1/2	SOLID @ 1-3/16"	134	130
PURPLE	207758A	2"	4-1/8"	.192	5.2	254	136	92

Actual tensions of springs vary from poundages and rates listed herein which are only COMET spring tension objectives. Certified spring tensions would cause springs to be significantly more expensive. Industry standards for springs permit an initial variance of $\pm 10\%$.

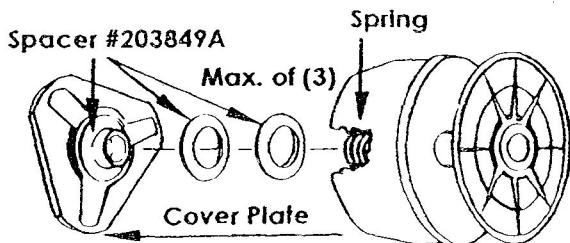
To "pre-load" these springs for greater initial tension, up to 3 spring shims (part #203849A - \$6.20 per set) may be used with most of them . . . "Bottoming out" of a spring coil upon coil even once will hasten its deterioration . . . so avoid using 3 shims if the "bottoming out" condition should result.



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NOTE-SPACER NO. 203849A:

To raise the Engagement by approximately 200 RPM. Install 1 spacer No. 203849A above the spring. A maximum of 3 spacers may be installed, raising the top engagement by approximately 600 RPM.



SPIDER SPACERS #203150A (102C)

#213875A (108C) 1 1/2" Dia. Center Post

#214393A (108C) 1 5/8" Dia. Center Post

Spider Spacers are used in conjunction with Cam Arms for belt clearance spacing. (I.e. "B" Cam Arms require two (2) --- 203150A in 102C to maintain spacing to allow engine to idle when used with 1 1/4" wide belt. "D" Cam Arms used in same scenario require one (1) --- 203150A.)

These Spacers can be used in any number, up two (2), with any Cam Arm if desired. The only real consideration being belt clearance at idle.



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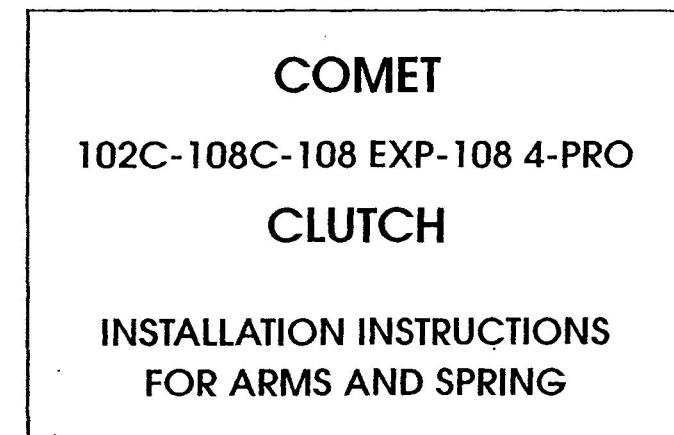
Richmond, IN 47374-2297
Fax:(765) 935-2346
<http://www.hoffcocomet.com>

IMPORTANT MESSAGE



**SAFETY
SYMBOL**

THIS SYMBOL OF SAFETY WILL ALERT YOU TO THE POSSIBILITY OF DANGER. CAREFULLY READ EACH MESSAGE THAT FOLLOWS THE SAFETY SYMBOL.



! CAUTION! When used to replace Cam Arms and Spring, use care when disassembling Cover – hold cover in place until all bolts are removed, then gradually ease cover off. See page 3 – Step #4 of this manual.



**INSTALLATION TO BE PERFORMED BY AUTHORIZED COMET®
DISTRIBUTORS OR DEALERS ONLY.**



**READ CAREFULLY: FAILURE TO COMPLY WITH THE
PROCEDURES HEREIN WILL VOID WARRANTY.**



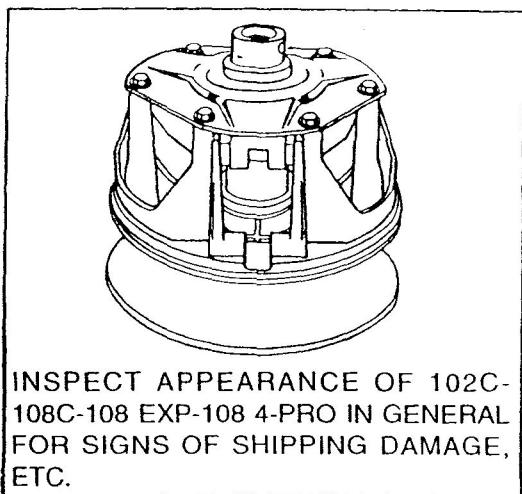
**DANGER! DON'T OPERATE ENGINE ABOVE 9000 R.P.M.
NEVER OPERATE ENGINE WITHOUT BELT AND BELT GUARD
IN PLACE. RACING APPLICATIONS AND/OR DISREGARD OF
WARNINGS WILL RESULT IN TOTAL DISCLAIM OF WARRANTY
OR ANY OTHER LIABILITY BY COMET® INDUSTRIES.**



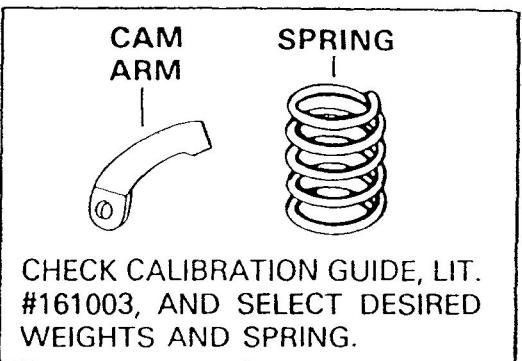
**LOC NUTS MUST NOT BE REAPPLIED FOR A THIRD TIME.
ALWAYS REPLACE AFTER USE IN TWO INSTALLATIONS.
ORDERING INFORMATION ON PAGE 2 OF THIS MANUAL.**

IMPORTANT

BEFORE PROCEEDING WITH INSTALLATION INSTRUCTIONS, CHECK THE FOLLOWING:



INSPECT APPEARANCE OF 102C-
108C-108 EXP-108 4-PRO IN GENERAL
FOR SIGNS OF SHIPPING DAMAGE,
ETC.



CHECK CALIBRATION GUIDE, LIT.
#161003, AND SELECT DESIRED
WEIGHTS AND SPRING.

CHECK BOLT KIT

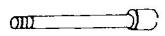
CHECK BOLT KIT*
INCLUDED IN
CLUTCH TO MAKE
SURE YOU HAVE ALL
THE HARDWARE.



WASHER
(6) 102C-108C-108 EXP
(8) 108 4-PRO

0

LOC NUT
(3) 102C-108C-108 EXP
(4) 108 4-PRO



**ARM PIVOT BOLT
(3) 102C-108C-108 EXP
(4) 108 4-PRO**

*TO REORDER BOLT KITS:

ORDER NO. 207869A (102C & 108C)
ORDER NO. 216349A (108 EXP -1993 & UP)
ORDER NO. 217855 (108 4-PRO)

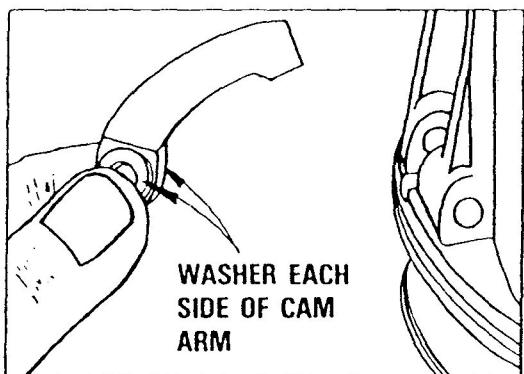
CAUTION!!

**LOC NUTS MUST NOT BE REAPPLIED A THIRD TIME.
ALWAYS REPLACE AFTER USE IN TWO INSTALLATIONS.
ORDER LOC NUT SERVICE KIT NO. 207953A FOR
102C/108C, ORDER NO. 212670A FOR 108 EXP. KIT
INCLUDES (3) LOC NUTS AS NEEDED PER ASSEMBLY.**

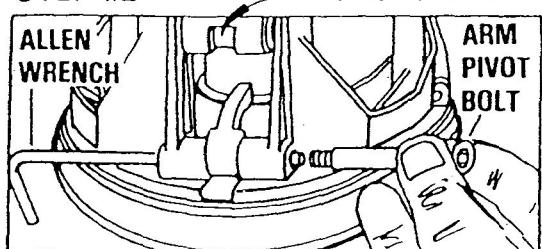
-INSTALLATION OF CAM ARMS AND SPRING

102C = 108C MODELS

STEP #1



STEP #2



Mark cover and moveable before removing cover. Reassemble in same orientation.

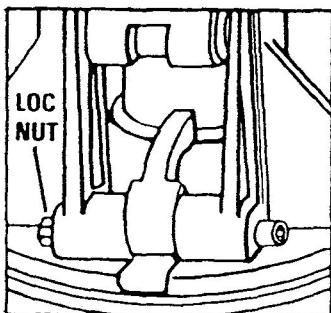
STEP #1:

Place an Arm Washer on each side of the Arm Pivot Hub. Using your left hand and index finger, hold washers and arm together. **LEFT HAND IS USED BECAUSE THE ARM BOLT MUST BE INSERTED FROM RIGHT TO LEFT.**

STEP #2:

Insert Arm in the Clutch Movable Sheave, making sure that the tip of the Arm is inside under the Spider Roller. Select an Arm Pivot Bolt and insert it from RIGHT to LEFT (an Allen Wrench may be used to make this easier to locate washer and arm).

STEP #3



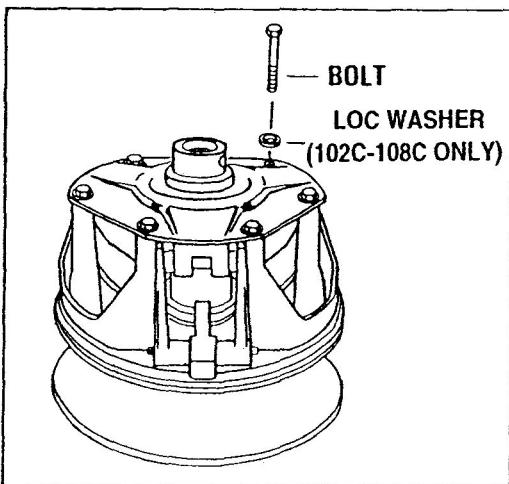
STEP #3

Select a Loc Nut and screw onto bolt. Tighten Loc Nut, being careful not to bind Spider Buttons against Towers. (See note below.)

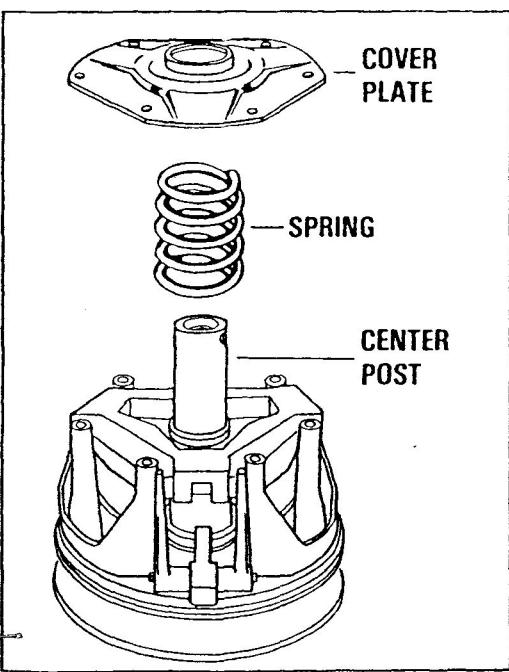
⚠ BEFORE CONTINUING INSTALLATION ...

IMPORTANT! AFTER ALL CAM ARMS ARE INSTALLED PER INSTRUCTIONS . . . BE CERTAIN THAT THE MOVABLE SHEAVE ASSEMBLY MOVES FREELY THROUGH ITS FULL TRAVEL BEFORE INSTALLING THE SPRING. IN THE EVENT THE MOVABLE SHEAVE IS RESTRICTED - IT MAY BE NECESSARY TO LOOSEN THE LOC NUT SLIGHTLY (102C-108C ONLY).

STEP #4

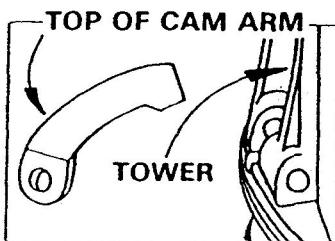


STEP #5



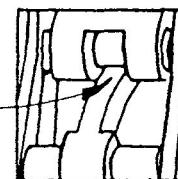
IMPORTANT! LUBRICATION INSTRUCTIONS

THESE INSTRUCTIONS MUST BE FOLLOWED ON A NEW ASSEMBLY AND/OR WHEN REPLACING CAM ARMS:



Lubricate Towers and top of Cam Arms (Roller Contact Area) with Comet GP730A (Dry Film Molylube or equivalent).

CAM ARMS – ROLLER CONTACT AREA



STEP #4:

Remove Bolts and Loc Washers (102C-108C ONLY).

Remove Cover Plate to install Spring.

⚠ CAUTION! WHEN USING THESE INSTRUCTIONS TO REPLACE CAM ARMS AND SPRING ...

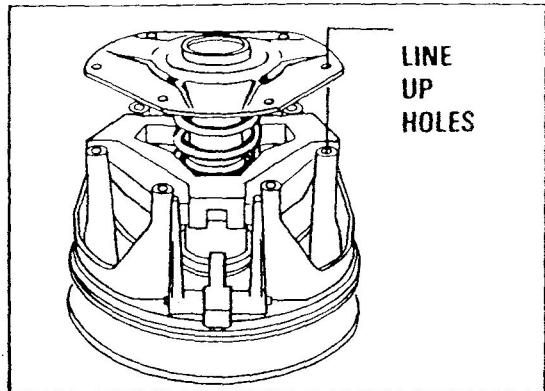
SPRING IS UNDER TENSION

Hold Cover Plate in place until all Bolts are removed, and gradually ease Cover Plate off.

STEP #5:

Install Spring over Center Post of Fixed Sheave.

STEP #6



STEP #6:

Once Spring is installed, reposition Cover Plate over Spring . . . line up holes in Cover Plate with holes of Movable Sheave as shown.

Push cover down far enough to install cover bolts. Installation of two bolts across from each other first will aid in this task. Torque to 135 in./lbs.



CAUTION! After Arms and Springs have been installed, compress Clutch a few times to check freedom of movement. RECHECK TO SEE THAT ALL ARMS AND SPRING HAVE BEEN INSTALLED CORRECTLY.



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LUBRICATION OF TORQUE CONVERTER DRIVE CLUTCH & DRIVEN UNITS

Belt driven torque converter drive and driven clutches found in current-day snowmobiles, ATV's, minibikes, utility vehicles, etc., like most mechanical devices, do require a schedule of regular preventative maintenance; this includes CLEANING and re-LUBRICATION. Equipment operated in RACING or in DUSTY, MUDDY or SANDY conditions needs more intensive care and frequent lubrication . . . maybe even after each time the machine is used.

Clutch & driven units, even if not exposed to such extreme conditions, still require a lubrication that will perform reliably without "breaking down," one that will not "slip away," one that will withstand the many thousands of pounds per square inch of centrifugal and torque pressure and one that will perform equally well on a variety of friction surfaces such as plastic guide buttons, steel rollers and pins, steel ramps and counter weights, fiber and metal bushings, etc.

The wear problems frequently attendant in this type of equipment are compounded by any lubricant capable of attracting dust, dirt, sand, etc. Even belt dust and metal particles resulting from the drive clutch and driven units' own wear will be trapped and accumulated in any kind of moist lubricant including oils, grease, anti-seizing compounds and the popular lubrication/water-displacing agents which supposedly do dry but really leave a "waxy" residue. Use of any such lubricant tends to trap this foreign matter, resulting in formation of a "cutting compound" type of abrasive action as well as a sticking and gumming action! A GENUINE DRY lubricant will prevent this while increasing operating efficiency and parts life, too . . . but graphite and silicon lubrications must be excluded because of their "abrasive" qualities, particularly to softer materials such as aluminum, plastics and fiber bushings.

AT LAST! ! . . . A DRY FILM LUBE THAT WORKS WONDERS FOR VARIABLE SPEED DRIVE SYSTEMS . . . and hundreds of other applications.

ABOUT GP-730A . . .

GP-730A is specially formulated for the unusual requirements of torque converter systems operating in dusty-dirty-sandy situations. Using a liquid or moist lubricant in these conditions can actually attract and hold dirt and grit that in turn causes malfunctions, premature wear and system failure.

COMET GP-730A is a dry-film lubricant that bonds to the surface being sprayed within one to two minutes or less in normal air-drying conditions. GP-730A contains a high percentage of micro-fine metallic additive (MoS_2) with excellent lubricating capabilities suspended in a unique bonding agent. GP-730A will not "dust away" or dislodge and bonding occurs without heating or baking. Even under sliding pressure GP-730A actually bonds to most ferrous and non-ferrous metals as well as to plastics, fibrous, wood, glass, rubber and many other friction surfaces. GP-730A performs well even under heavy load and extreme pressure. It greatly enhances effectiveness of normal lubricants applied over it. GP-730A is non-corrosive, inert to water, oil and many acids, solvents and alkalis. GP-730A contains no oil, grease, wax or silicone; it will not attract dust or dirt. GP-730A greatly lowers metal-to-metal contact and thus reduces power consumption and torque-loss.

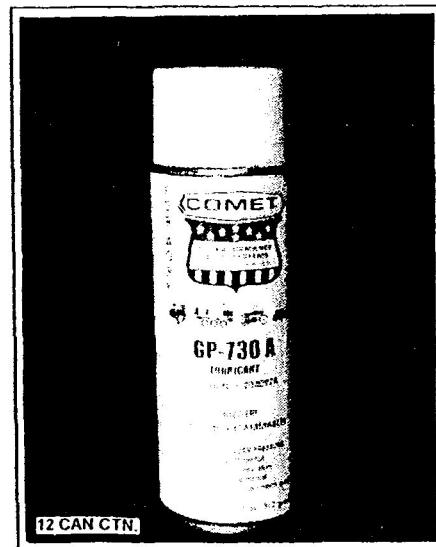
Temperature Service Range: -300°F (-184°C) to +700°F (+371°C).

A nozzle extension tube is provided with can for concentrating and focusing the spray and reducing waste.

What's all that mean . . . ?

COMET GP-730A dry-film lubricant is super stuff for your COMET torque converter drive and driven units and even most other brands of this equipment, too!

APPLICATION: Follow the directions for use on can label. Use in **ALL** models of COMET torque converter drive clutch AND driven unit on the working surfaces of **ALL** parts, including both rolling & sliding surfaces; WE DO here at the factory, too! Take care to avoid getting GP-730A on the belt or sheave surfaces. (NOTE: COMET GP730A is not suitable as a roller chain lubricant.) Please, always keep COMET GP-730A DRY LUBE handy for use during regular shop inspections and maintenance. You'll be glad you did!



Extend the life of your equipment merely by regularly freeing it of belt residue & belt dust. Don't let your equipment get "All gummed up!" . . . or excessive parts wear will result!

NET WEIGHT: 11.00 oz 312 grams Spray Can

Order No. 204097A

Case of 12 cans — Order No. 204804A



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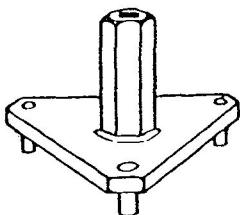
150235A 981 PRINTED U.S.A.

COMET'S SPECIAL TOOLS FOR DISASSEMBLY OF TORQUE CONVERTERS

CLUTCH SPIDER TOOL — 100C - 101C - 102C - 108C - 108 EXP - 108 4-PRO

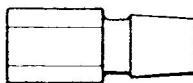
SPIDER TOOL

(SPIDER TOOL)
 (215723A) — 3 POST



SPIDER TOOL COMPLETE
 ORDER NO. 213966A

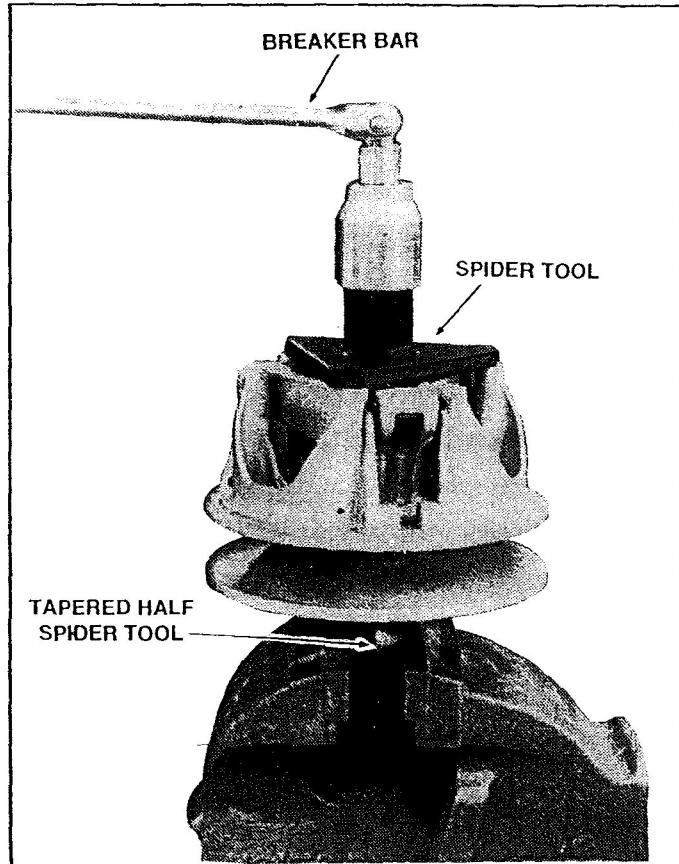
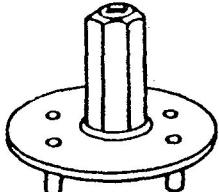
TAPERED HALF,
 SPIDER TOOL
 (213965A)



This new version of the Spider Tool fits all models of the 100 Series drive clutches; i.e. 100C thru 108C and Polaris P85 clutches. Simply secure the tapered half (Part No. 213965A) in a vise, or use a standard socket and breaker bar. Attach the clutch to the taper, as you would to the engine crankshaft, using your engine clutch mounting bolt . . . it may be necessary to torque up as you would on the engine. Then using the spider tool, loosen spider. After all servicing is completed, remove the clutch using your standard clutch puller. Spider should be torqued to 250 ft./lbs.

NOTE: Tapered piece has 1/2-20 S.A.E. thread. If your engine mounting bolt is of some other thread, it will be necessary to obtain a 1/2-20 S.A.E. bolt.

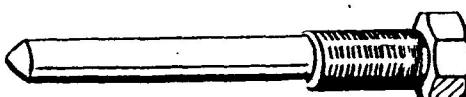
(SPIDER TOOL)
 (217222A)
 108 4-PRO



CLUTCH PULLER TOOLS — 102C - 108C - 108 EXP - 108 4-PRO

The handiest combination of tools you can find to remove the snowmobile clutch from the crankshaft.

PULLER TOOL
 ORDER NO. 216097A



Pulls all 102C-108C-108 EXP (up to 1995) except Original Equipment Yamaha 102C and #212215A 102C.

PULLER TOOL
 ORDER NO. 217153A
 217336A



Pulls all
 1996/97 108 EXP
 and 108 4-PRO

Order your Clutch-Puller sets now. Take the sweat and possibility of clutch damage out removals.

PULLER TOOL# 217336A Use on clutches 217104-107-204-207-503-504-507-600-604-607

All other 217,s series use 217153A PULLER

Use 217336A for all models 1998 & after.

CLUTCH PULLER TOOLS — 94C

PULLER TOOL KIT
ORDER NO. 205840A

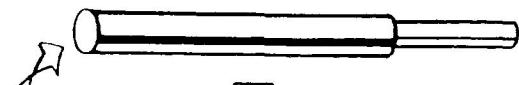
PULLS 94C MODELS:
206096A - 212629A

PULLER TOOL KIT
ORDER NO. 205838A

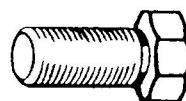
PULLS 94C MODELS:
206094A - 209942A - 211879A - 213051A

KITS INCLUDE:

A — PULLER ROD



B — PULLER BOLT



C — WASHER

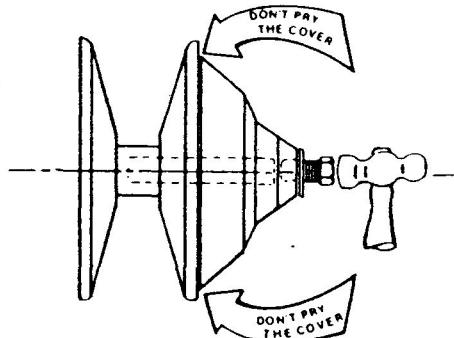


REMOVING 94C DUSTER FROM CRANKSHAFT PTO

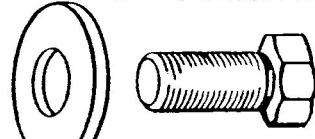
1. Remove the main retaining bolt from the engine crankshaft PTO and clutch assembly.
2. Slide Puller Rod "A" into stem, small diameter first.
3. Thread the Puller Bolt "B" into the clutch stem onto end of Puller Rod "A" and continue tightening Puller Bolt "B" until clutch loosens from crankshaft PTO.
4. Remove Puller Bolt and slip clutch off crankshaft PTO. Note that this may often be easier by first removing the drive belt.

REMOVING THE COVER OF 94C DUSTER

1. Remove the clutch from the engine crankshaft PTO.
2. Using the Washer "C" and Puller Bolt "B" thread the bolt into the clutch stem approximately 1/2".
3. Rap the head of the Puller Bolt briskly with a hammer several times until the cover springs loose.



B — PULLER BOLT

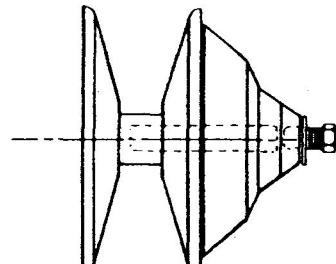


C — WASHER

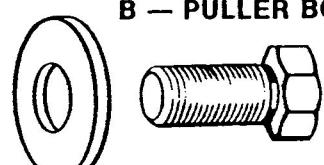
NEVER PRY OR BEAT ON THE COVER TO BREAK IT LOOSE FOR REMOVAL FROM THE ASSEMBLY! Use the PULLER BOLT furnished in kit and follow this procedure. (See illustration.)

REASSEMBLY OF COVER

1. To reassemble, place the cover in position, align the flats of the post with the flats in the cover. Use the Washer "C" and the Puller Bolt "B" and tighten until top of cover is flush with tip end of stem. Remove the Puller Bolt and Washer.



B — PULLER BOLT



C — WASHER



JOHN DEERE TO COMET PART NUMBER CROSS REFERENCE

This Cross Reference is a list of John Deere Snow Mobile Part Numbers. The numbers connected to a bracket or number indicates that all numbers inside the brackets are needed to make up that John Deere number.

EXAMPLE: AM53406 ————— [203906A
 207869A]

To make AM53406 - 203906A and 207869A are needed. If you have a number not listed, please contact Comet Aftermarket Sales, (317) 966-8161.

JOHN DEERE PART NUMBER	COMET PART NUMBER	PART DESCRIPTION	QTY. REQ.
AM52996	204581A	SK-F/F OF 209000A 102C	1
AM52997	207757A	SK-SPD CMP-100/101/102	1
AM52998	204240A	SK-102C RLRS PINS ETC.	1
AM53000	203150A	WSH/SPA 90 & 100 TC DVR	2
AM53002	202698A	SCR HX HD 1/4	1
AM53003	202892A	ARM CAM C-3 REQUIRED	3
AM53004	203393A	F/F 3/4B W/KWY 90 DVN	1
AM53095	208801A 207120A 207869A 203082A	AK-M/F W/CVR HWR-102C CVR PLT/BSH-HD-102C SK-PIV BOLTS & NUTS-102C ARM CAM F-3 REQUIRED	1 1 1 3
AM53406	203906A 207869A	ARM CAM M-3 REQUIRED SK-PIV BOLTS & NUTS - 102C	3 1
AM53407	205069A	KIT MVB FACE 101C	1
AM53463	203362A	KVN 90D TC 7/8B X 3/16	1
AM53476	208801A 207869A 203082A 207120A	SK-M/F W/CVR HWR-102C SK-PIV BOLTS & NUTS - 102C ARM CAM F-3 REQUIRED CVR PLT/BSH-HD-102C	1 1 3 1
AM53546	203392A	F/F 7/8B W/KEY 90 DVN	1
AM53733	207756A	SK-PARTS TO 205201C CST	1
AM53734	205447A	BTN-H/D #203431C/TORLON	6
AM53735	207120A	CVR PLT/BSH-HD-102C	1
AM53736	204247A	ARM CAM P-3 REQUIRED	3
AM53737	207757A	SK-SPD CMP-100/101/102	1
AM53738	204332A	BTN INS-ALL 90D & 100D	3
AM53739	204247A 208801A 207869A	ARM CAM P-3 REQUIRED SK-M/F W/CVR HWR-102C SK-PIV BOLTS & NUTS - 102C	3 1 1
AM53740	204207A 204332A	CAM 27DEG 90/100D DRVN BTN INS-ALL 90D & 100D	1 3
AM53741	203388A	M/F 90D DRIVEN	1
AM53942	204581A	SK-F/F OF 209000A 102C	1
AM53948	204294A	USE 208801A SK-M/F	1
AM53949	203082A	ARM CAM F-3 REQUIRED	3
AM54086	204280A	BSH INS-DUR W/RNG 102C	1
AM54166	207757A	SK-SPD CMP-100/101/102	1
AM54167	208801A 207869A 205137A	SK-M/F W/CVR HWR-102C SK-PIV BOLTS & NUTS - 102C ARM CAM T/3 REQUIRED	1 1 3

**JOHN DEERE TO COMET
PART NUMBER CROSS REFERENCE**

JOHN DEERE PART NUMBER	COMET PART NUMBER	PART DESCRIPTION	QTY. REQ.
AM54168	207869A 205137A	SK-PIV BOLTS & NUTS - 102C ARM CAM T/3 REQUIRED	1 3
AM54249	205249A 207869A	ARM CAM R-3 REQUIRED SK-PIV BOLTS & NUTS - 102C	3 1
AM54255	207869A 205149A 207757A 207120A	SK-PIV BOLTS & NUTS - 102C ARM CAM R-3 REQUIRED SK-SPD CMP-100/101/102 CVR PLT/BSH-HD-102C	1 3 1 1
AM54280	207869A 203378A	SK-PIV BOLTS & NUTS - 102C ARM CAM K-3 REQUIRED	1 3
AM54281	205169A 207869A	ARM CAM U-3 REQUIRED SK-PIV BOLTS & NUTS - 102C	3 1
AM54282	203911A 207869A	ARM CAM N-3 REQUIRED SK-PIV BOLTS & NUTS - 102C	3 1
AM54283	207869A 202550A	SK-PIV BOLTS & NUTS - 102C ARM CAM B-3 REQUIRED	1 3
AM54284	203837A 207869A	ARM CAM L-3 REQUIRED SK-PIV BOLTS & NUTS - 102C	3 1
AM54285	203089A 207869A	ARM CAM E-3 REQUIRED SK-PIV BOLTS & NUTS - 102C	3 1
AM54286	203088A 207869A	ARM CAM D-3 REQUIRED SK-PIV BOLTS & NUTS - 102C	3 1
AM54387	207869A 205353A	SK-PIV BOLTS & NUTS - 102C ARM CAM HE-1/3 REQUIRED	1 3
AM54288	205357A 207869A	ARM CAM HE-2/3 REQUIRED SK-PIV BOLTS & NUTS - 102C	3 1
AM54289	205257A 207869A	ARM CAM W/3 REQUIRED SK-PIV BOLTS & NUTS - 102C	3 1
AM54290	205385A 207869A	ARM CAM HE-3/3 REQUIRED SK-PIV BOLTS & NUTS - 102C	3 1
AM54305	207757A	SK-SPD CMP-100/101/102	1
AM54306	208801A	SK-M/F W/CVR HWR-102C	1
AM54307	205432A	BTN FOR 205201C CASTING	6
AM54308	207756A	SK-PARTS TO 205201C CST	1
AM54665	205581A	FIXED FACE & POST 94C	1
AM54666	205584A	MOVEABLE SHEAVE 94C	1
AM54667	205914A	COVER W/PILOT WASHER	1
AM54710	106143A	PUCK 3/4 HLE WDG 94C	3
AM54870	206649A	WGT WEDGE 1 IN. HOLE 94C	3
AM54871	206902A	PUCK 7/8 HLE WDG 94C	3
AM54873	206911A 207689A	ARM CAM Q/3 REQUIRED ARM A-1/3 REQUIRED	3 3
AM54920	207689A 206995A	ARM A-1/3 REQUIRED ARM CAM HE-4/3 REQUIRED	3 3
AM54934	206895A	USE 208804A SK-F/F	1
AM54935	205169A 208801A 207869A	ARM CAM U/3 REQUIRED SK-M/F W/CVR HWR-102C SK-PIV BOLTS & NUTS - 102C	3 1 1
AM54938	205581A	FIXED FACE & POST 94C	1
AM55073	207757A	SK-SPD CMP-100/101/102	1
AM55074	207756A	SK-PARTS TO 205201C CST	1
AM55112	207820A 207869A	ARM CAM HE-5/3 REQUIRED SK-PIV BOLTS & NUTS - 102C	3 1
AM55119	205914A	COVER W/PILOT WASHER	1
AM55159	207674A 207869A	ARM CAM 4-1/3 REQUIRED SK-PIV BOLTS & NUTS - 102C	3 1

JOHN DEERE TO COMET
PART NUMBER CROSS REFERENCE

JOHN DEERE PART NUMBER	COMET PART NUMBER	PART DESCRIPTION	QTY. REQ.
AM55162	207869A 208801A 207674A	SK-PIV BOLTS & NUTS - 102C SK-M/F W/CVR HWR - 102C ARM CAM R-1/3 REQUIRED 3	1 1 3
AM55172	207869A 207801A	SK-PIV BOLTS & NUTS - 102C ARM CAM B/3 REQUIRED	1 3
AM55173	207801A 208801A 207869A	ARM CAM B/3 REQUIRED SK-M/F W/CVR HWR - 102C SK-PIV BOLTS & NUTS - 102C	3 1 1
AM55191	208801A	SK-M/F W/CVR HWR - 102C	1
AM55193	207869A	SK-PIV BOLTS & NUTS - 102C	1
AM55195	208853A 207869A	ARM CAM U-1/3 REQUIRED SK-PIV BOLTS & NUTS - 102C	3 1
AM55196	207753A 208801A 207869A	ARM CAM U-1/3 REQUIRED SK-M/F W/CVR HWR - 102C SK-PIV BOLTS & NUTS - 102C	3 1 1
AM55252	207869A	SK-PIV BOLTS & NUTS - 102C	1
AM55325	208232A 207869A	ARM CAM B-2/3 REQUIRED SK-PIV BOLTS & NUTS - 102C	3 1
AM55555	208232A 207869A	ARM CAM B-2/3 REQUIRED SK-PIV BOLTS & NUTS - 102C	3 1
AM55563	207756A	SK-PARTS TO 205201C CST	1
AM55606	207869A 209011A 208801A	SK-PIV BOLTS & NUTS - 102C ARM CAM K-1/3 REQUIRED SK-M/F W/CVR HWR - 102C	1 3 1
AM55607	207869A 209011A	SK-PIV BOLTS & NUTS - 102C ARM CAM K-1/3 REQUIRED	1 3
AM55656	208306A 204818A 207953A 206995A	DVR 102C H/D/ SPL-KAWA SPG SILVER 102C SK-3 LOC NUTS - H/D 102C ARM CAM HE-4/3 REQUIRED	1 1 1 3
AM55687	207869A 209776A	SK-PIV BOLTS & NUTS - 102C ARM CAM HE-6/3 REQUIRED	1 3
AM55724	207120A	CVR PLT/BSH-HD-102C	1
AM55738	207120A	CVR PLT/BSH-HD-102C	1
AM68753	207877A	SPG-RED 102C	1
M52995	203111A	BTN-STD IN 90D/100DVN	3
M52998	207757A	SK-SPD CMP-100/101/102	1
M63686	205447A	BTN-HD #203431C TORLON	6
M64604	207120A	CVR PLT/BSH-HD-102C	1
M64605	203982A	BSH UP. GUIDE 100/101C	1
M64606	203474A	SPG-WHITE-100 SERIES	1
M64607	202996A	WSH PILOT 100/101/102C	1
M64608	203108A	CAM 34DEG 90/100D DVN	1
M64609	203114A	SPG-RED 90D/100D	1
M64610	203664A	RNG RETAING 90D-100D	2
M64611	203109A	BSH-HUB 100D-90D	1
M64612	202992A	COVER-STL-100/101 DVR	1
M65450	207869A 203906A	SK-PIV BOLTS & NUTS - 102C ARM CAM M-3 REQUIRED	1 3
M65473	203982A	BSH UP. GUIDE 100/101C	1
M65684	204115A	SPG BLACK - 100 SERIES	1
M66023	204272A	CVR-STEEL-102C DVR	1
M66024	204287A	SPG BLUE 102C	1
M66025	204278A	WSH STL PILOT - 102C ONLY	1
M66026	204267A	SPG-BLUE 90D/100D	1
M66026	204818A	SPG-SILVER 102C	1
M66692	205040A	SPG-BRN 102C SERIES	1

**JOHN DEERE TO COMET
PART NUMBER CROSS REFERENCE**

JOHN DEERE PART NUMBER	COMET PART NUMBER	PART DESCRIPTION	QTY. REQ.
M66756	205137A 207869A	ARM CAM T/3 REQUIRED SK-PIV BOLTS & NUTS - 102C	3 1
M66877	205257A 207869A	ARM CAM W/3 REQUIRED SK-PIV BOLTS & NUTS - 102C	3 1
M66878	207869A 205353A	SK-PIV BOLTS & NUTS - 102C ARM CAM HE-1/3 REQUIRED	1 3
M66879	207869A 205357A	SK-PIV BOLTS & NUTS - 102C ARM CAM HE-2/3 REQUIRED	1 3
M66947	203082A	ARM CAM F-3 REQUIRED	3
M66948	204247A	ARM CAM P-3 REQUIRED	3
M66949	207869A 205249A	SK-PIV BOLTS & NUTS - 102C ARM CAM R-3 REQUIRED	1 3
M66950	207869A 203378A	SK-PIV BOLTS & NUTS - 102C ARM CAM K-3 REQUIRED	1 3
M66951	207869A 205169A	SK-PIV BOLTS & NUTS - 102C ARM CAM U/3 REQUIRED	1 3
M66952	203911A 207869A	ARM CAM N/3 REQUIRED SK-PIV BOLTS & NUTS - 102C	3 1
M66953	207869A 202550A	SK-PIV BOLTS & NUTS - 102C ARM CAM B/3 REQUIRED	1 3
M66954	203837A 207869A	ARM CAM L/3 REQUIRED SK-PIV BOLTS & NUTS - 102C	3 1
M66955	202892A	ARM CAM C/3 REQUIRED	3
M66956	207869A 203089A	SK-PIV BOLTS & NUTS - 102C ARM CAM E/3 REQUIRED	1 3
M66957	203088A 207869A	ARM CAM D/3 REQUIRED SK-PIV BOLTS & NUTS - 102C	3 1
M66958	207869A 205385A	SK-PIV BOLTS & NUTS - 102C ARM CAM HE-3/3 REQUIRED	1 3
M66965	207120A	CVR PLT/BSH-HD-102C	1
M67798	206143A	PUCK 3/4 HLE WDG 94C	3
M67799	205820A	SPG-WHITE 30MM 94C	1
M68507	205583A	SPG-ORANGE 30MM 94C	1
M68828	204280A	BSH INS-DUR W/RNG 102C	1
M68829	207869A	SK-PIV BOLTS & NUTS - 102C	1
M68853	208175A	SPG-GOLD-102C SERIES	1
M68887	207888A	SPG-PURPLE-102C SERIES	1
M69023	208175A	SPG-GOLD-102C SERIES	1
M69559	209696A	SPRING SILVER/BLK 102C	1
M69761	211286A	SK-BSH/RNG 207120A CVR	1
M69762	211286A	SK-BSH/RNG 207120A CVR	1



COMET INDUSTRIES DIV. OF HOFFCO INC.
358 N.W. "F" STREET, RICHMOND, INDIANA 47374

