

102C & 108C SERVICE PARTS

207120A COVER ASSEMBLY KIT — 102C ONLY

Steel cover plate with guide bushing. Use this assembly to replace frayed or worn 102C upper guide bushing or to take place of dust cover "can" and aluminum cover plate/bushing assembly in 100C, 101C and early 102C clutches. Can also be used on 108C's.

213933A COVER ASSEMBLY KIT — 108C

Can also be used on 102C's.

207756A ROLLER KIT—102C/108C—EXCEPT 1986, 1989, & LATER—(Includes all items EXCEPT spider casting.)

214920A ROLLER KIT - 102C/108C - 1989 & AFTER (Includes all items EXCEPT spider casting.)

207869A PIVOT BOLTS & NUTS KIT

Contains full set of precision arm mounting parts . . . washers, specially hardened pivot bolts & 6 lock nuts.

207953A LOCK NUTS KIT — SET OF 3

These are damaged with arm change; ALWAYS replace with new ones.

208342A ARM PIVOT BUSHINGS — SET OF 3

Repair bushed arms with these service replacement bushings.

204280A LWR BUSHING KIT—102C ONLY—UP TO 1986

Repair any 102C which has frayed or worn guide bushing in its movable face with this kit.

204799 30MM-25MM BUSHING — 94C, 102C, 108C

Adapts 30MM Bore to most 25MM 1:10 tapered crankshafts.

211286A BUSHING — 102C

For 207120A Cover Plate.

213265A LOWER BUSHING KIT — 102C/108C 102C - 1986 & AFTER — 108C - 1988

213823A 108C ONLY — LOWER BUSHING KIT

Replaces Moveable Bushing, 1987 ONLY.

214910A SPIDER KIT — 108C (was 213818A)

Includes heavy-duty spider casting & all its buttons, rollers, pins, washers. Fits 100C, 101C, 102C & 108C clutches; features heavy-duty buttons, thrust washers, etc.

214917A SPIDER KIT — 102C (was 207757A)

Includes heavy-duty spider casting & all its buttons, rollers, pins, washers. Fits 100C, 101C, 102C & 108C clutches; features heavy-duty buttons, thrust washers, etc.

214913A ROLLERS ONLY FOR 214910A AND 214917A SPIDER KITS.

204288A ROLLERS ONLY FOR 207757A AND 213818A SPIDER KITS.

102C & 108C TOOLS

204366A PULLER TOOL — 102C & 108C

Pulls 102C, also pulls all 108C, 101C, 100C clutches from "tapered" crankshaft PTO's.

213966A "SPIDER TOOL" KIT - CONTAINS 213965A & 215723A
Removes & assists to properly re-tighten ALL 100 Series Torque Converters. This tool assembly is our very latest and painted solid black to distinguish it from the earlier orange colored model.

213965A TAPERED POST "SPIDER TOOL"

215723A "SPIDER TOOL" - REPLACES 208346A

211314A PULLER TOOL —

Pulls all original equipment Yamaha 102C's and #212215A Yamaha 102C.

94C SERVICE PARTS

204799A 30MM-25MM BUSHING —

Adapts 30MM Bore to accept most 25MM 1:10 tapered crankshafts.

205828A BELT WIDTH KIT —

Adjusts #206094A to accept both 1-3/16" and 1-1/4" top width belts.
Note: Production of #206094A after May 1, 1978 includes this kit pre-installed.

205829A BELT WIDTH KIT —

Adjusts #206094A to accept 1-5/16" top width belts.

205830A BELT WIDTH KIT —

Adjusts #206094A to accept 1-3/8" top width belts.

205831A BELT WIDTH KIT —

Adjusts #206094A to accept 1-7/16" top width belts.

205832A BELT WIDTH KIT —

Adjusts #206094A to accept 1-1/2" top width belts.

94C TOOLS

205817A CLUTCH PULLER ROD —

Use with cover puller bolt packed with each #206094A - 215060A.

205838A CLUTCH PULLER KIT —

Includes #205817A rod, a cover puller bolt and washer.

205839A CLUTCH PULLER ROD —

Use with cover puller bolt packed with each #206096A - 211572A.

205840A CLUTCH PULLER KIT —

Includes #205839A rod, a cover puller bolt and washer.

102C - 108C AND 94C LUBE, LOCTITE

204097A GP-730A "DRY" SPRAY LUBE —

12-3/4 oz. can of COMET's "good stuff" clutch & torque converter lube; this should be used and none other on all parts contact wear surfaces of 102C. This is a high-range heat resistant lube with ability to withstand 100,000 PSI. Ask for COMET Literature #152527 for details.

204804A GP-730A BY THE 12-CAN CASE —

206950A LOCTITE —

0.5cc tube — enough for 1 or 2 of most applications.

DECALS, PATCH, BELT BUCKLE, CAP

Beautiful in bold red, white and blue . . . decals and embroidered cloth patches for jackets, machines, jumpsuits, etc.

203531A DECAL —

COMET 4-1/2" Shield Emblem — Vinyl, Stick-Fast Decal.

203884A DECAL —

COMET 2-1/4" Shield Emblem — Vinyl, Stick-Fast Decal.

212596A DECAL —

COMET 15" Shield Emblem — Vinyl, Stick-Fast Decal.

13016A SEW-ON PATCH —

COMET 4-1/2" Shield Emblem — Cloth, Washable Sew-On Patch.

160731A BELT BUCKLE —

COMET Shield Emblem — Solid brass with brush finish.

161051A ADJUSTABLE BLUE CAP —

Cloth and Mesh Cap w/Comet Hi-Performance Patch.

161036 REV. 5-92 PRINTED U.S.A.

COMET[®] industries

SIMPLICITY at its finest

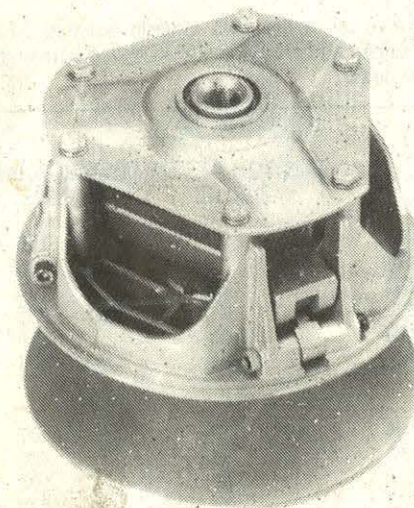
Fewer parts, precisely made with perfect compatibility to one another makes the DUSTER the finest "EVERYDAY" clutch known yet for snowmobiles and ATV's.

- Costs less than you would ever expect to pay for a good clutch!
- Outperforms clutches costing twice as much.
- Simple . . . in construction, to install, to calibrate!
- Doesn't require constant maintenance . . . put it on and forget it's there.
- Will last for a long, long time . . . probably longer than your sled.
- There's a DUSTER for almost every application. . . regardless of belt top width or crankshaft sizes.

94C DUSTER



102C



108C

PERFORMANCE at its best

Designed for snowmobiles and other applications that require a full range of exceptional ability from engagement through the highest speeds available from the power source.

- The 102C and 108C are the best clutches yet for snowmobiles and other machines using belt driven torque converter drive systems.
- Unsurpassed tuning ability.
- Outperform clutches of similar design.
- First with open face design.
- Designed for economical servicing.

COMET[®] INDUSTRIES
A DIVISION OF HOFFCO[®], INC. RICHMOND, IN
358 N.W. "F" ST., RICHMOND, IN 47374-2297 U.S.A.
TEL: (317) 966-8161 FAX: (317) 935-2346

94C

For family fun, for work, even just to get a tired old machine moving again, the DUSTER does it better . . . better than your machine's original clutch did when it was new. We can say this because we KNOW. Someone YOU know probably already has a 94C DUSTER on their machine. There's a DUSTER to fit YOUR snowmobile, too!



206094A 94C CLUTCH —

30MM 1:10 tapered bore. Adjusts to belts 1-3/16" thru 1-1/2" wide. Comes with kit #205828A pre-installed. Stock #206094A thus accepts both 1-3/16" and 1-1/4" wide belts, just as it comes — right out of the box. Also contains six pucks #205918A and orange spring #205583A. Since the majority of snowmobiles, including those with engines such as Kohler, CCW (Kioritz), JLO, Hirth, Tohatsu, Kawasaki, Sachs, Klehaefer, Mercury, Xenoah, Suzuki, Yamaha, etc. have a 30MM — or occasionally a 25MM 1:10 tapered crank, this is the most popular DUSTER clutch. Also for FL350 Odyssey.

206095A 94C CLUTCH —

1 inch bore w/1/4" keyway. For 1-3/16" wide belts — contains six pucks #206514A and pink spring #205858A. Often used on early models of Ski-Daddler, Sno Pony, etc., this bore size and calibration is for 4-cycle engines such as Tecumseh, Kohler, Briggs & Stratton, etc.

206096A 94C CLUTCH —

30MM 1:10 tapered "deep" bore. We call this "32MM" to avoid confusion w/normal bore in #206094A. For 1-3/8" wide belts — contains six pucks #205918A and orange spring #205583A. For Polaris snowmobiles only — made from 1972 and equipped with Polaris/Star engine.

206097A 94C CLUTCH —

3/4"-16 threaded "Rotax" bore. For 1-3/16" wide belts — contains six pucks #205918A and pink spring #205858A. Older and smaller Ski-Doo snowmobiles require this bore size.

206098A 94C CLUTCH

7/8"-14 threaded "Rotax" bore. For 1-3/16" top widths belts — contains six pucks #205918A and blue spring #205847A. Larger but older Ski-Doo snowmobiles require this bore size.

209739A 94C CLUTCH —

Identical to 94C #206095A except it is 1-1/8" in bore.

209942A 94C CLUTCH —

30MM 1:10 tapered bore for 1-5/16" wide belts — contains nine pucks #206143A and yellow spring #205818A. Fixed face has 6 "bosses" to accept various ring gears of Bombardier electric start systems. Great for machines such as Everest, etc. . . . but will not fit Citation models. See #211879A for Citation models.

211879A 94C CLUTCH —

30MM 1:10 tapered bore. Use belts 1-5/16" wide — contains 6 pucks #205918A and orange spring #205583A. Fixed face has 6 "bosses" to accept various ring gears of Bombardier electric start — the main application of this 94C duster is Ski-Doo Citation.

212629A 94C CLUTCH —

30MM 1:10 tapered bore. Contains 6 pucks #205918A and red spring #212631A. Limited application. This clutch is ONLY for those Yamaha models built from about 1974 to the present which require a gear attached to the back side of the clutch for driving oil injection system. Included among the models this clutch fits are some "GP" Series models, most Exciters, etc. This COMET clutch DOES NOT interchange with nor fit all Yamaha "geared" models. If there is any question of it, check with your Yamaha dealer.

213051A 94C CLUTCH

30MM 1:10 tapered bore; for 1-1/4" wide belts. Contains 6 pucks #205918A and red spring #212631A. Limited application. This clutch is ONLY for those Yamaha models built from about 1974 to the present which require a gear attached to the back side of clutch for driving oil injection system. Included among the models this clutch fits are some GP models, GS-250 and GS-300 models. This COMET clutch DOES NOT interchange with nor fit all Yamaha "geared" models. If in doubt, consult your owners manual or check with your Yamaha Dealer.

211493A 94C CLUTCH

This clutch is like 206094A with ribbed cover, adjusts to belts 1 3/16" wide. Comes with Kit #205828A installed. Stock 211493A thus accepts both 1 3/16" and 1 1/4" wide belts, as it comes. Contains 6 pucks #211477A and orange spring #205583A. Fits all sleds #206094A fits.

94C COMET DRIVE SYSTEM CONVERSION KIT

for the HONDA Odyssey

209187A 94C KIT —

All components of this conversion kit are ready to "bolt on." Kit includes 94C #209234A drive clutch, #209451A belt and 90D #212371A driven "T.C." (readily accepts transfer of Odyssey brake disk). This kit is suggested for the occasional racer and the person weary of constant drive system maintenance and expense. 94C calibration: 6 pucks #206143A and #205820A spring.

102C DRIVE SYSTEM CONVERSION KIT

for the HONDA Odyssey

209257A 102C KIT —

All components of this conversion kit are ready to "bolt on." Kit includes 102C #209254A drive clutch, #209451A belt and 90D #212371A driven "T.C." (readily accepts transfer of Odyssey brake disk). This kit is suggested for the Odyssey with extensively modified/tuned engine . . . for all types of racing. 102C calibration: #208968A arms & #203474A spring.

ACTIVATOR PUCKS - 94C

FOR USE WITH SMOOTH COVER #205760A

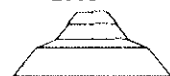
206649A
206902A
206143A
205361A
205918A
206513A
206514A
206515A

APPROX. GRAM WGT.

15.6/1" Hole
17.3/7/8" Hole
20.0/3/4" Hole
24.5/Round Solid
25.5/Solid
44/3/4" Steel Insert
53.5/7/8" Steel Insert
59.6/1" Steel Insert

FOR USE WITH RIBBED COVER #211489A

— — — —
215127A
212029A
— — — —
211477A
211481A
211482A
211483A



SMOOTH COVER/RIBBED COVER

Comet now has available a "Ribbed" Cover to use in lieu of the original "Smooth" cover. This cover is designed for use in high load, or heat conditions to stop rotation of the moveable face during high load conditions. In the past, there have been instances of puck melt-down in this situation. **IMPORTANT! Only matching ribbed pucks can be used with the ribbed cover. See listing above for cross reference from smooth to ribbed pucks.**

The activator pucks all fit the 94C models but use caution when working with the pucks and always install in mated sets of three. Refer to 94C calibration guide.



SPRINGS - 94C

TENSION AT COMPRESSION HEIGHT

2 5/16" 1 1/4"

1 5/16 O.D.

205819A GRN
205583A ORN
205821A RED
205818A YEL
205820A WHT
215097A SIL

70

74

75

86

100

31

150

223

160

205

285

231

1 9/16 O.D.

205858A PNK
205857A BLK
205847A BLU
212631A RED

43

85

99

74

87

156

196

223

* Pounds tension when compressed to height of 2 5/16" and 1 1/4". NOTE: Accepted industry tolerance for compression spring is ± 10%. Thus a given 94C Duster calibration may vary somewhat from a like set-up shown above.

102C

For a clutch great in race track performance, try our Heavy-Duty 102C or 108C. Shop and compare and you will see. Precision workmanship and materials, superb design (including the "open face" — for enhanced cooling, cleaning & lubrication), a great selection of "mod" components, . . . a proven record on the track and trail . . . you're a winner with COMET'S 102C and 108C.

205004A 102C CLUTCH —

30MM 1:10 tapered bore; accepts 1-3/16" wide belts. This clutch fits same crankshaft PTO's as #209000A and fits FL350 Odyssey. Calibration: N1 Cam Arms #209642A and Yellow Spring #203475A.

208300A 102C CLUTCH — WITHOUT CAM ARM AND SPRING

This clutch will fit 1980 SRX, 1980-1990 SRV, 1980-1983 SS440, 1984-1990 Phazer, 1981-82 SRX and 1987-1989 Exciter.

208301A 102C CLUTCH —

30MM 1:10 tapered bore; limited application. This clutch is ONLY for those Yamaha models built from about 1974 to the present which require a gear attached to the back side of clutch . . . for driving oil injection system. Included among the models this clutch fits are some "GP" Series models, most Exciters, etc. This COMET clutch DOES NOT interchange with nor fit all Yamaha "geared" models. Calibration: F-2 Cam Arms #211333A and Silver Spring #204818A.

208302A 102C CLUTCH —

30MM 1:10 tapered bore; accepts 1-5/16" wide belts. Limited application. This clutch is ONLY for those Bombardier (Ski-Doo and Moto-Ski) machines which are LIQUID-COOLED and includes models such as 9500, 7500, UltraSonic, SuperSonic, etc. Calibration: C-2 Cam Arms #208968A and Silver Spring #204818A.

208303A 102C CLUTCH —

30MM 1:10 tapered bore; accepts 1-5/16" wide belts. This clutch is in particular for those Bombardier (Ski-Doo & Moto-Ski) machines made in model years of 1976 and later which are NOT liquid-cooled . . . including models such as Blizzard 5500, Citation, Everest, Futura, Mirage, etc. Calibration: F-2 Cam Arms #211333A and White Spring #203474A.

208306A 102C CLUTCH —

30MM 1:10 tapered bore; limited application. This clutch is ONLY for those Kawasaki engines found as original equipment in Kawasaki brand and John Deere brand snowmobiles . . . and also for 1981 Yamaha model "SRX". Calibration: B-1 Cam Arms #207801A and Yellow Spring #203475A. Calibration is not necessarily suited for all applications. Setup is suitable for 1981 SRX and most Kawasaki.

209002A 102C CLUTCH —

7/8"-14 threaded bore; accepts 1-3/16" wide belts. This clutch is for Bombardier (Ski-Doo & Moto-Ski) Rotax engines — and includes mostly their larger but older snowmobiles made prior to the 1974/1975 model year and some models after that time. Calibration: F-2 Cam Arms #211333A and White Spring #203474A.

209003A 102C CLUTCH —

3/4"-16 threaded bore; accepts 1-3/16" wide belts. This clutch is for Bombardier (Ski-Doo & Moto-Ski) Rotax engines — and includes mostly their smaller but older snowmobiles made prior to the 1974/1975 model year and some models after that time. Calibration: F-2 Cam Arms #211333A and White Spring #203474A.

212600A 102C CLUTCH —

WITHOUT CAM ARMS AND SPRING

30MM 1:10 tapered bore; accepts 1-1/4" wide belts and adjustable to 1-5/16". This clutch fits the majority of machines, including those with engines such as Kohler, CCW (Kioritz), JLO (Rockwell), Hirth, Tohatsu, Kawasaki, Sachs, Klehaefer, Mercury, Xenoah, Suzuki, Yamaha, late model Rotax (Bombardier), etc. which have a 30MM tapered crank; this is perhaps the most popular 102C. However, please note that some models of these engine makes do have alternate shapes. Calibration: SEE CALIBRATION GUIDE.

108C

213999A 102C CLUTCH —

30MM 1:10 tapered bore; accepts 1-3/16" wide belts. This clutch is for FL350 Odyssey. Calibration: N1 Cam Arms #209642A and Yellow Spring #203475A.

214601A 108C CLUTCH —

This clutch is for 1980 Models SRX, 1980-1990 SRV, 1980-1983 SS440, 1984-1989 Phazer & 1987-89 Exciter. Use 214603A with F-2 Cam Arm #211333A and Silver Spring #204818A for 1990 Exciter. Use 102C #208306A for 1981/82 Yamaha "SRX". Use #209000A or #212600A for 1976-79 "SRX". Use 208300A for 1990 Phazer. Clutch can be adjusted to 1 3/8" wide belt. Calibration is for SRV and SS440. Change to C-2 Cam Arm #208968A and Yellow Spring #203475A for SRX. This clutch is presently calibrated with Cam Arms F-2 #213337A and Silver Spring #204818A. May interfere with bolt heads on 1980 SRX injection pump.

214602A 108C CLUTCH — WITHOUT CAM ARMS AND SPRING

30MM 1:10 tapered bore; accepts 1-3/8" wide belts. Limited application. This clutch is ONLY for Polaris machines with Polaris/Star engine AND whose crankshaft PTO extends into clutch approx. 2 inches. Use 102C #208215A if PTO enters clutch only approx. 1-1/4 inches. This clutch is not necessarily calibrated for all Polaris sleds of this crankshaft style. Consult a Comet Dealer for specific calibrations on your sled. Calibration: SEE CALIBRATION GUIDE.

214603A 108C CLUTCH —

WITHOUT CAM ARMS AND SPRING — LIKE 214600A

30MM 1:10 tapered bore; accepts 1-3/8" wide belts ONLY. This clutch will fit all Arctic Cat Models with 1 3/8" wide belts. Also fits short crank Polaris and 1990 Yamaha Exciter. Clutch can be adjusted to 1 1/4" wide belt. Calibration: SEE CALIBRATION GUIDE.

214604A 108C CLUTCH —

30MM 1:10 tapered bore; accepts 1-3/8" wide belts. This clutch is for Ski-Doo 9700 and other new Ski-Doo belt applications. Calibration most suited for 1985 and up Formula Plus and Formula MX. Other applications may require some tuning. Calibration: A-2 Cam Arms #208221A and Yel/Grn Spring #208228A.

214605A 108C CLUTCH —

30MM 1:10 tapered bore accepts 1-3/8" wide belts. Limited application. This clutch is only for John Deere Liquifire 1982 and up. Calibration: Cam Arms B-1 #207801A and Purple Spring #207888A. Can also be used on V-Max with slight realignment of Driven.

214606A 108C CLUTCH — 1-1/4" BELT

30MM 1:10 tapered bore; accepts 1-1/4" wide belts. Limited application. This clutch fits Yamaha V-MAX to 1985 and up. Calibration for Yamaha V-Max. Other applications may need tuning. Calibration: A-3 Cam Arms #208268A and Silver Spring #204818A.

215000A 108C CLUTCH w/BOSSSES —

30MM 1:10 taper bore; accepts 1 3/8" wide belts. Without Cam Arm and Spring. Like 214603A except this clutch is equipped with bosses on the fixed face for mounting Arctic Cat starter gear.

DRIVEN (SECONDARY)

100D SERIES 10-3/4" DIA.

211991A	3/4" Bore	3/16 K'way	1 1/4 Belt
212000A	1" Bore	1/4 Key	1 1/4 Belt

90D SERIES 9-13/16" DIA.

212291A	1" Bore	1/4 Key	1 3/16 Belt
212292A	1" Bore	1/4 Key	1 1/4 Belt
212299A	3/4" Bore	3/16 K'way	1 3/16 Belt
212301A	3/4" Bore	3/16 K'way	1 1/4 Belt
212303A	7/8" Bore	3/16 K'way	1 1/4 Belt
212371A	ODYSSEY		
	3/4" Bore	3/16 K'way	1 1/4 Belt

SERVICE BULLETIN #150235 REV. 6-92 PRINTED U.S.A.

COMETS' SPECIAL TOOLS FOR DISASSEMBLY OF TORQUE CONVERTERS

CLUTCH SPIDER TOOL — 100C - 101C - 102C - 108C

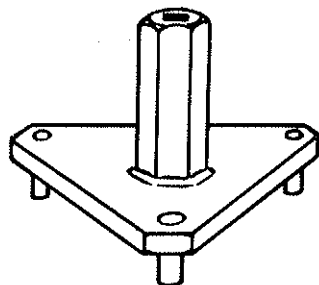
NEW, IMPROVED SPIDER TOOL

SPIDER TOOL COMPLETE — ORDER NO. 213966A
PKG. CODE J

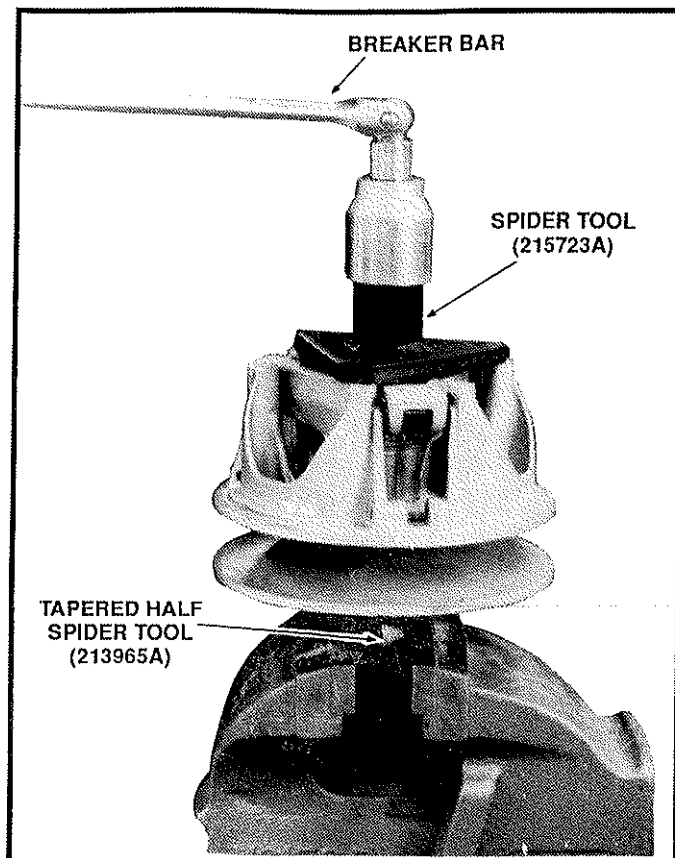
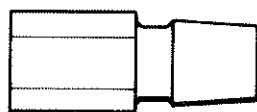
This new version of the Spider Tool fits all models of the 100 Series drive clutches; i.e. 100C thru 108C and Polaris P85 clutches. Simply secure the tapered half (Part No. 213965A) in a vise, or use a standard socket and breaker bar. Attach the clutch to the taper, as you would to the engine crankshaft, 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)
(215723A)

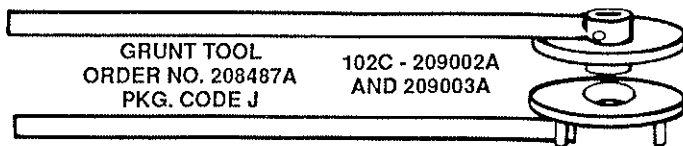


TAPERED HALF
SPIDER TOOL
(213965A)



GRUNT TOOL
ORDER NO. 208487A
PKG. CODE J

102C - 209002A
AND 209003A

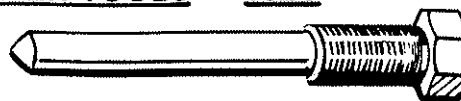


CLUTCH PULLER TOOLS

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

CLUTCH PULLER TOOLS — 102C

PULLER TOOL
ORDER NO. 204366A
PKG. CODE J



Pulls all 102C-108C except Original Equipment Yamaha 102C and #212215A 102C.

PULLER TOOL
ORDER NO. 211314A
PKG. CODE J



Pulls all Original Equipment Yamaha 102C's and #212215A 102C.

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

CLUTCH PULLER TOOLS — 94C

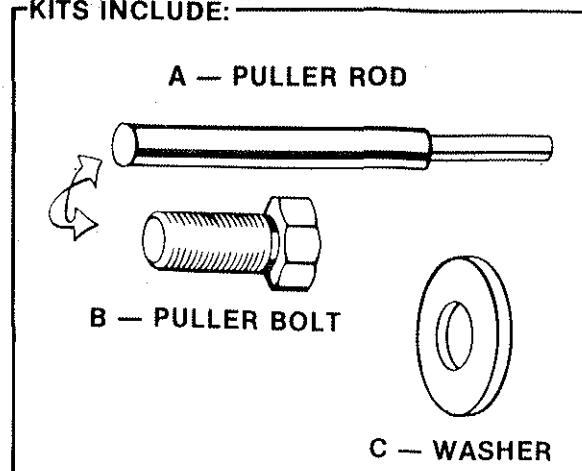
PULLER TOOL KIT
ORDER NO. 205840A
PKG. CODE B

PULLS 94C MODELS:
206096A - 212629A

PULLER TOOL KIT
ORDER NO. 205838A
PKG. CODE B

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

KITS INCLUDE:

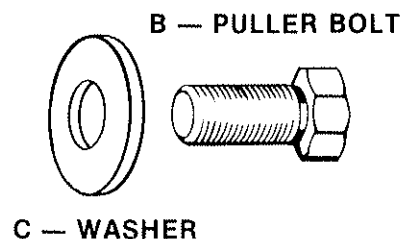
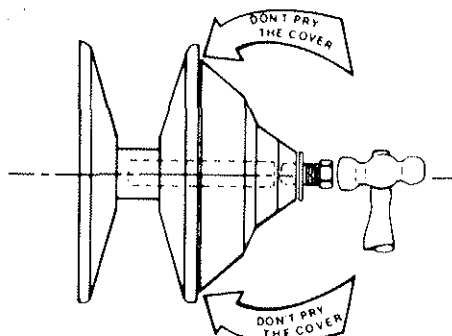


REMOVING 94C DUSTER FROM CRANKSHAFT PTO

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

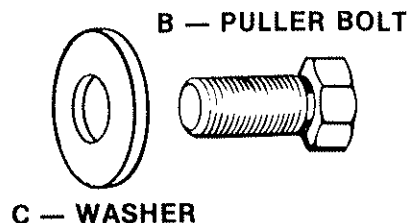
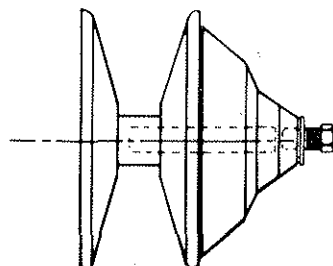
1. Remove the clutch from the engine crankshaft PTO.
2. Using the Washer "C" and Puller Bolt "B" thread the bolt into the clutch stem approximately 1/2".
3. Rap the head of the Puller Bolt briskly with a hammer several times until the cover springs loose.



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.



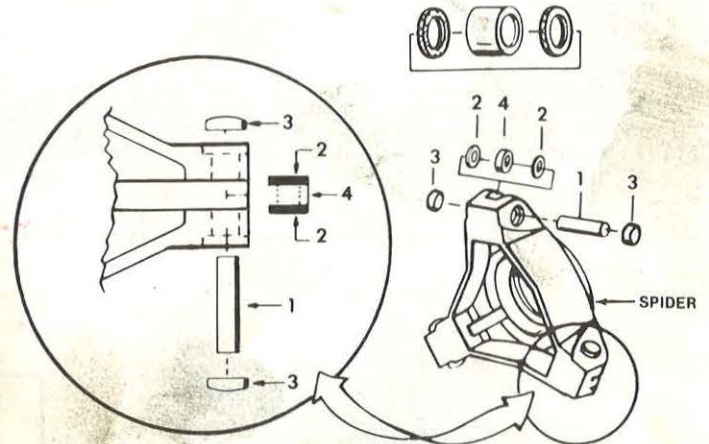
KIT NO. 207756A
FOR USE ON SPIDER ASSEMBLY 207757A - 102C
AND SPIDER ASSEMBLY 213818A - 108C
UP TO AND INCLUDING 1988

****EXCEPT BLUE DOT SPIDER (1986)**

If spider needs replacing, order KIT NO. 214917A which contains complete spider assembly for 102C or KIT NO. 214910A for 108C.

ITEM NO.	PART NO.	DESCRIPTION	QTY. REQ.
1	205200A	Pin, 3/8" Dia. x 1" Long	3*
2	207327A	Washer, Thrust	6*
3	205432A	Button, Contoured, Guide	6*
4	204288A	Roller w/Bushing Insert, 3/8" I.D.	3*

*NOTE: Items 1 thru 4 may be ordered only in Packages of QTY. REQ. COLUMN

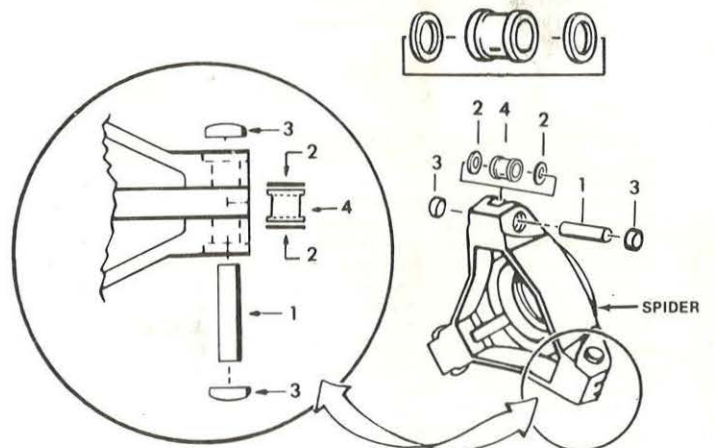


KIT NO. 214920A
FOR USE ON SPIDER ASSEMBLY 214910A - 108C
AND SPIDER ASSEMBLY 214917A - 102C - 1989
SPIDER IDENTIFIED BY A "WR" EMBOSSED ON ONE
LEG OF SPIDER ON THE BOTTOM SIDE. (Roller Side)

If spider needs replacing, order KIT NO. 214917A which contains complete spider assembly for 102C or KIT NO. 214910A for 108C.

ITEM NO.	PART NO.	DESCRIPTION	QTY. REQ.
1	205200A	Pin, 3/8" Dia. x 1" Long	3*
2	207327A	Washer, Thrust	6*
3	205432A	Button, Contoured, Guide	6*
4	214913C	Roller w/Bushing Insert, 3/8" I.D.	3*

*NOTE: Items 1 thru 3 may be ordered only in Packages of QTY. REQ. COLUMN. Item 4 is only available in this kit.



****NOTE:**

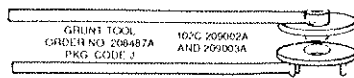
102C MFG. FOR 1986 INCORPORATED SPIDER ASSEMBLY KIT NO. 213333A. THIS KIT IS NO LONGER AVAILABLE. THESE SPIDERS ARE IDENTIFIED BY A BLUE PAINT DOT NEXT TO INNER HUB. REPLACE THESE ASSEMBLIES WITH KIT NO. 214917A.

CHG: New Spider for 108C/102C - 1989

SPIDER REMOVAL PROCEDURE

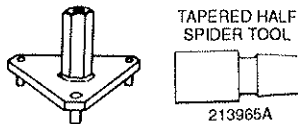
1. **IMPORTANT!** Mark to match before disassembly.
2. Remove cover & spring from the clutch.
3. The spider assembly is screwed onto the clutch post. Loctite used to help retain the spider on clutch post as well as tightness resulting from normal operation of the drive clutch can make spider removal a real chore. Always use the **COMET SPIDER TOOL** #213966A or #208487A or their equivalent to loosen & re-tighten the spider assembly.

OLD STYLE (208487A)



The Grunt Tool is approximately 26" long and 10 pounds in weight.
Order No. 208487A

NEW STYLE (213966A)



SPIDER TOOL
215723A

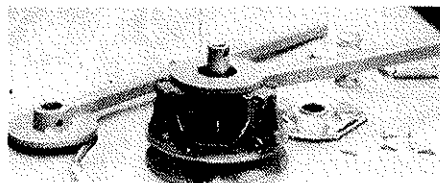
213966A

CAUTION! If this tool is not available, use extreme care in loosening the spider from the clutch post. **DO NOT** use a hammer or pound with any tool as the risk of fracturing or stressing the spider is too great. The Grunt Tool is a two-piece wrench. As the photos indicate, one "arm" of this tool is for turning and is slipped down over the post so that its pins rest alongside the legs of the spider. . . (The other half of TOOL NO. 208487A is used for holding and is thus slipped over the

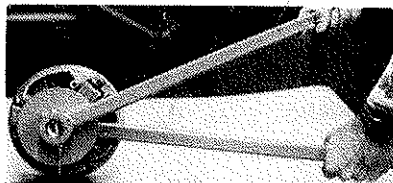
Clutch Post, and using the hardened pin provided, is pinned to the Clutch Post. This tool, No. 208487A can be used to remove Spiders of all 102C's. It is used specifically for Clutch No's. 209002A and 209003A. TOOL NO. 213966A has a tapered half, much like the Crank shaft end on most snowmobiles. As the photos indicate, this portion is simply attached to the clutch via the mounting bolt. Tighten this portion as you would the clutch to the crank shaft. As the photos further indicate you can then use either a vise to hold this portion, as well as the clutch, or use a large Breaker Bar with 1 1/4 Socket while the Spider is loosened. This tool can be used for all 102C's except 209002A and 209003A, and specifically for all 108C's. Spiders have right hand threads.)

4. A small amount of heat may be applied to center of hub area of the spider casting. **CAUTION:** Only a small amount of heat may be applied! Serious damage to the casting, post and spider components will result if excessive heat is applied. Insert steel extensions into or over the Grunt Tool handles if added leverage is required for spider's removal.
5. When the spider assembly has been removed, it is a fairly simple matter to dis-assemble its small parts. If tight, the buttons may be gripped with pliers and gently twisted out of their sockets. Just don't use the extreme force of hammering when removing pins, etc. **REMEMBER:** You are going to turn it to thousands of R.P.M.'s when it is re-assembled. And bending, stress or fractures will be the source of serious problems.

OLD STYLE (208487A)

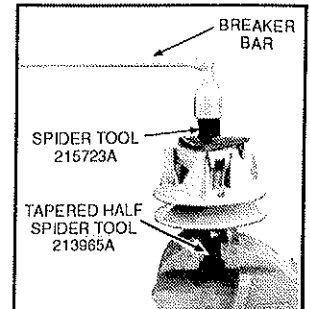
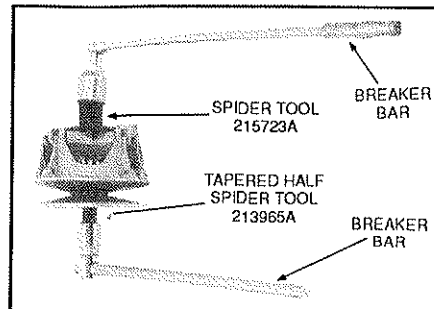


Lower half of Grunt Tool is in position.



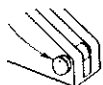
Upper half of Grunt Tool is pinned in place & spider is ready to be loosened.

NEW STYLE (213966A)



SPIDER RE-INSTALLATION PROCEDURE

1. Inspect the spider casting for damage, stress marks, cracks, etc. Likewise, inspect each and every one of the rollers, pins, buttons and washers in turn for wear and to see that they will re-seat themselves properly. If any of the small parts are to be replaced they must be replaced as a matched set. For example, if one of the buttons is damaged or loose, replace all six of the buttons.
2. Thoroughly clean all parts of this assembly with an evaporative solvent. Now is a good time to give pieces, sockets and seats all a coating of lubricant. COMET'S GP-730A dry lube or its equivalent is ideal for this.
3. Assemble the small parts of the spider assembly into the spider casting following the appropriate assembly sequence diagram shown on the other side of this page. No force should be necessary; if so, inspect for worn parts, burrs, defects, etc. It will likely be necessary to gently tap the buttons into place; use the handle of a screwdriver or a light hammer for this. Note that later COMET spider guide buttons have four "ridges" on their outside circumference. This extra material is intentional and to help them stay seated. Likewise, most COMET guide buttons have a molded-in dot(s) on their specially contoured surface. It is important that these contours be aligned with those of the columns. Place the "dot" of the buttons UP (or DOWN) as shown.



The contoured buttons **MUST** be positioned properly to accommodate the guide contour of the movable sheave column.

Of course, pliers may be used, gently, for rotating the button in its socket to achieve proper positioning.

4. As a check, it is a good idea to place the now assembled spider assembly within the movable face casting and move it up and down therein. If it does not move freely and/or it binds or "catches", there is a problem to correct. Re-check that the buttons are seated solidly and that their "dots" are UP or DOWN. If the spider assembly again fails the "free movement" test within the movable face, check the face for damage. Contact COMET INDUSTRIES for aid if no visible problem can be found.
5. Clean the threads of the spider and clutch post just prior to re-assembly. Then apply a generous amount of Loctite #271 (red) to the entire threaded area of the post. Proceed immediately with screwing the spider assembly together with the movable face down onto the clutch post. Complete this step at once and before the Loctite "sets up" by using the Spider Tool or its equivalent to tighten the spider. Spider should be torqued to 250 FT./LBS.
6. As a final check, slide the movable face back and forth again. Though it may seem somewhat "stiff", it should still move freely when pushed and must not **BIND** on the legs of the spider. If the assembly fails this test, reverse your steps., checking for the cause of this problem. **NOTE:** A bent clutch post can also cause this and would need to be replaced, if so. **ALSO NOTE:** If there is any "play" between the movable face and spider assembly, enough that the complete assembly could be picked up and rattled by a rapid wrist action, then the buttons and/or their sockets and/or the insides of the columns may be too worn and further parts replacement must be considered.

Contact COMET INDUSTRIES at once if you have a question or problem you cannot otherwise resolve.