



FARM PRODUCTS & ACCESSORIES

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FARM PRODUCTS & ACCESSORIES

FEATURES

- Power Ratings Up to 125 hp
- Splined PTO Adapters to Fit Most Tractor and Implement Shafting
- Kwik-D-Tach Connections for Safe and Secure Attachments
- Forged Adapters for High Horsepower Applications
- Clamp Type Adapters for Safe Permanent Installations
- Over-Running Couplers for Handling High-Inertia PTO Applications
- Splined Shafts, Couplings and Hubs for Convenient Design and Fabrications
- Stroke Control Segments for Hydraulic Cylinders
- Overhung Load Adapters for Orbit Motors
- Pump Drives for PTO Driven Hydraulic Pumps
- PTO Speed Changers to Facilitate Tractor/Implement Adaptations

OPTIONS

- Special Over-Running Coupler
- Modified and Custom Shafts, Hubs and Couplings
- Contact Hub City with Your Design Requirements!





WARRANTY

Hub City Inc. warrants product to be free from defect in material and workmanship for one year from date of shipment. The company will repair or replace, F.O.B. shipping point, any item found to be defective upon

inspection at Hub City's factory in Aberdeen, South Dakota within one year from date of shipment. See Terms and Conditions of Sale at the end of this catalog for complete warranty and limitation of liability statement.

ADJUSTMENT POLICY

SPLINED SHAFT ADAPTORS: Broken or damaged Splined Shaft Adaptors returned directly to the factory in

Aberdeen, South Dakota, will be replaced on a no-charge basis.

FOR USER/OPERATOR SAFETY, SEE DETAILS ON PAGES Q-4, Q-5 & Q-11

HOW TO ORDER

When ordering Hub City Farm Products and Accessories specify the part number and quantity for each item ordered. Orders may be placed by mail, telephone, fax or e-mail.

**Hub City Inc.
Box 1089
Aberdeen, SD 57401**

**Telephone: 605/225-0360 Fax: 605/225-0567
E-Mail: sales@hubcityinc.com
Website: www.hubcityinc.com**

Q



IMPORTANT INFORMATION!
PLEASE READ BEFORE USING PRODUCT



PTO MOUNTED ACCESSORY SAFETY INSTRUCTION

The application of Hub City farm products/accessories may expose rotating implement drive line components from the equipment guarding and/or extend the tractor P.T.O. shaft and/or contract the implement drive line.

For the safety of the user/operator, the purchaser or his/her designee must shield and guard any exposed rotating components and extend the hitch point or shorten the implement drive line to accommodate the use of these products/accessories.

For the safety of the user/operator, the Hub City products in this catalog identified by this symbol  must be used only on the tractor P.T.O. shaft.

APPLICATION

Mounting a Hub City PTO accessory on your tractor changes the relationship between the end of the operating (rotating) PTO shaft and the end of the tractor master power take-off (PTO) shield.



This change can result in exposed rotating implement drive line components and if left unguarded can result in serious injury or death to the user/operator.

To use this Hub City PTO accessory, you MUST extend the tractor master PTO shield to provide proper guarding of the implement PTO drive line.

The tractor to which you will be mounting this Hub City Power Take-off (PTO) accessory, must be equipped with an ASAE approved Tractor Master Power Take-Off (PTO) Shield supplied by the tractor manufacturer or constructed to American Society of Agricultural Engineers Standards and a Power Take-Off (PTO) Shield Extension as identified below and in Figure No. 1. If the tractor will not have these two (2) shields, DO NOT mount or use this PTO accessory.



Failure to properly guard can result in serious injury or death.

Your PTO driven implement MUST BE equipped with a shielded drive line at all times when using this Hub City power take-off accessory! If your PTO driven implement drive line is equipped with a tunnel type drive line shield that is attached to the drive line pedestal on the implement and attaches to the slot and tang on the tractor master power take-off (PTO) shield, that allows the tunnel shield to telescope as you turn corners, DO NOT use the implement with this or any other Hub City PTO accessory. The tractor master power take-off shield extension shown in Figure No. 1, covers the tractor master power-take off shield slot and tang and will not allow the attachment of the tunnel type drive line shield.



Before mounting the PTO device on the tractor power take-off (PTO) shaft, and configuring and mounting a PTO shield extension, disengage the tractor power take-off PTO shaft and shut off the tractor engine.

INSTRUCTIONS

The information below will guide you in extending the tractor master power take-off (PTO) shield. If you are unable or unwilling to extend the tractor master power take-off (PTO) shield do not use or mount this Hub City PTO Accessory on your tractor.

The requirements of a tractor master power take-off (PTO) shield and its relationship to the tractor power take-off (PTO) shaft, that will provide the specifications to extend your tractor master power take-off (PTO) shield, can be obtained from:

The American Society of Agricultural Engineers (ASAE) – 2950 Niles Road – St. Joseph, MI 49085-9659
Phone #616-429-0300, FAX #:616-429-3852, E-mail: hq@asae.org, Web: <http://asae.org/>
Ref: Std #S203.13, December 1999 or latest revision, front & rear power take-off for agricultural tractors.

Global Engineering Documents – 15 Inverness Way East – Englewood, CO 80112-5776
Phone #303-397-7956 or 800-854-7179, Fax #: 303-397-2740, E-mail global@ihs.com
Ref: ASAE Std S203-13 December 1999 or latest revision

Your tractor manufacturer, Ref: Your owner/operators manual for mailing address and phone number.

Your local implement dealer from whom you purchased your tractor or who provides similar tractors.



IMPORTANT INFORMATION!

PLEASE READ BEFORE USING PRODUCT



In the construction of a tractor master power take-off (PTO) shield extension, the following information can be used as a guideline.

CAUTION DO NOT USE this power take-off shield extension guideline with PTO accessories NOT manufactured by Hub City.

The shield extension material must be steel, the same or a greater thickness than the steel used in the tractor master power take-off (PTO) shield.

The shield extension material should be formed to closely fit the contour of the inside of the tractor master power take-off (PTO) shield.

The shield extension should be fastened to the tractor master power take-off (PTO) shield with a minimum of (7) 5/16 NC Grade 5 bolts, with flat washers, lock washer and nut, (2) bolts on each side and (3) bolts on top of the shield extension.

CAUTION DO NOT USE the tractor master power take-off (PTO) shield or the shield extension as a step.

A generic guideline for the dimensional size & construction characteristics of a PTO shield extension are shown in Figure No. 1:

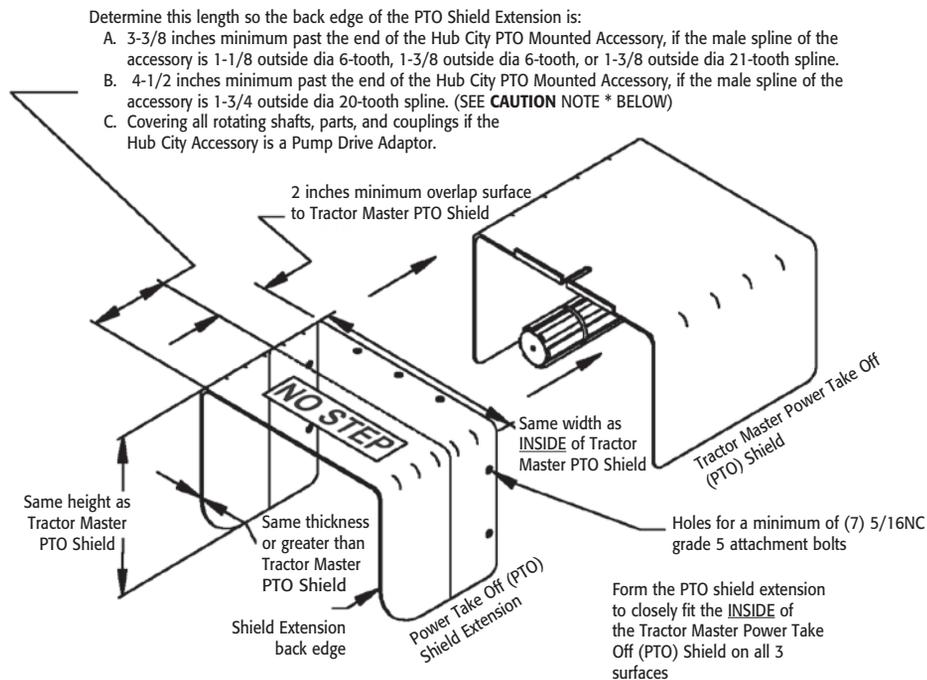


Figure No. 1

CAUTION *If this Hub City PTO mounted accessory has a 1-3/4 outside diameter 20-tooth male spline, and is being mounted on a 1-1/8 or 1-3/8 outside diameter 6-tooth or 1-3/8 outside diameter 21-tooth male spline tractor PTO shaft, the tractor master power take-off (PTO) shield on the tractor is narrower and closer to the tractor PTO shaft than a tractor equipped with a 1-3/4 20-tooth male spline PTO shaft. Using this adaptor and extending the tractor master PTO shield as illustrated above may result in interference between the implement drive line shield and the tractor master power take-off (PTO) shield and extension during short turns or very uneven ground. If this condition is evident, the tractor master power take-off (PTO) shield and extension must be modified to provide sufficient implement drive line and drive line shield clearance.

DANGER The installation of this Hub City PTO accessory on your tractor also changes the relationship between the end of the operating PTO shaft and the tractor draw bar hitch point. This extended tractor PTO shaft condition may require you to extend the tractor hitch point, and/or shorten the implement drive line to reduce excessive drive line angularity, resulting from short turns or very uneven ground, and/or prevent the implement drive line from bottoming out, which may damage the Hub City accessory and/or equipment and result in injury to the user/operator.

P.T.O. PRODUCTS

Q



FOR USER/OPERATOR SAFETY SEE
DETAILS PAGE Q-4

P.T.O. PRODUCTS

SPLINED ADAPTORS – TO 75 HP

- Capacity to operate on tractors related to 75 P.T.O. HP
- Provide a means of connecting two dissimilar splines
- Welded steel construction for added strength
- Corrosion resistant finish
- Spring and retaining ring pin or setscrews furnished



FEMALE SPLINE	MALE SPLINE	LENGTH (INCHES)	EXTENDS TRACTOR P.T.O.		SECURED BY	PART NUMBER
			SHAFT END	SHAFT RETAINING GROOVE		
25mm-18	1 3/8-6	4 5/8	3 3/8	3 1/2	Cross Pin	0332-00084*
1 1/8-6	1 3/8-6	5 1/2	3 3/4	3 5/8	Cross Pin	0332-03531
1 1/8-6	1 1/8-6	5 1/2	3 3/4	3 5/8	Cross Pin	0332-00377*
1 3/8-6	1 1/8-6	6 1/2	4 3/8	4 1/4	Cross Pin	0332-00400
1 3/8-6	1 1/8-6	5 1/8	3 5/16	3 5/16	Cross Pin	0332-00420
1 3/8-6	1 3/8-6	6 1/2	4 3/8	3 7/8	Cross Pin	0332-00371
1 3/8-6	1 3/8-6	5 1/8	3 5/16	3 5/16	Cross Pin	0332-00378
1 3/8-21	1 3/8-6	6 1/2	4 3/8	3 7/8	Setscrew	0332-00373
1 3/8-21	1 3/4-20	7	5	4 1/2	Setscrew	0332-00070
1 3/4-6	1 3/8-6	6 1/2	4 3/4	4 5/8	Cross Pin	0332-00401

* MANUFACTURED TO ORDER

SPLINED ADAPTORS – TO 125 HP

- Capacity to operate on tractors related to 125 P.T.O. HP
- Developed for long and rugged use
- Alloy steel, heat treated for extra strength
- Corrosion resistant finish
- Setscrews furnished



FEMALE SPLINE	MALE SPLINE	LENGTH (INCHES)	EXTENDS TRACTOR P.T.O.		SECURED BY	PART NUMBER
			SHAFT END	SHAFT RETAINING GROOVE		
1 3/8-21	1 3/8-21	6 7/8	4 13/16	4 13/16	Setscrew	0332-00001
1 3/8-21	1 3/8-6	6 7/8	4 13/16	4 11/16	Setscrew	0332-00002
1 3/8-21	1 3/4-20	7 11/16	5 31/64	4 63/64	Clamp Type	0332-00094**
1 3/8-6	1 3/8-21	6 7/8	4 13/16	5 5/16	Setscrew	0332-00004
1 3/8-6	1 3/8-6	6 7/8	4 13/16	5 3/16	Setscrew	0332-00005*

** NOT HEAT TREATED

* MANUFACTURED TO ORDER

CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST



FOR USER/OPERATOR SAFETY
SEE DETAILS PAGE Q-4



P.T.O. PRODUCTS

KWIK-D-TACH SPLINE ADAPTORS – TO 75 HP

- Capacity to operate on tractors rated to 75 P.T.O. HP
- Patented Quick Release Drive
- New P.T.O. Quick Release Concept – Spring Loaded –rotates about 30° by hand for quick release
- Dependable operation – no sticking pins. Always easily operated
- No sharp edges, protrusions, pins or other interferences to injure operators



⊗ SEE USAGE SAFETY WARNING ON PAGE Q4

FEMALE SPLINE	MALE SPLINE	LENGTH (INCHES)	EXTENDS TRACTOR P.T.O.		PART
			SHAFT END	SHAFT RETAINING GROOVE	
1 3/8-6	1 3/8-6	6 1/2	4 3/8	4 3/8	0332-00010
1 3/8-6	1 3/8-21	6 1/2	4 3/8	4 7/8	0332-00013
1 3/8-6	1 1/8-6	6 1/2	4 3/8	4 3/4	0332-00015*
1 3/8-21	1 3/8-6	6 1/2	4 3/8	3 7/8	0332-01373
1 3/8-21	1 3/8-21	6 1/2	4 3/8	4 3/8	0332-02121
Repair Kit					0332-00086

* MANUFACTURED TO ORDER

SPLINED ADAPTORS – TO 75 HP

For tractors with 1 3/4 - 20 Spline P.T.O.

⊗ SEE USAGE SAFETY WARNING ON PAGE Q4

FEMALE SPLINE	MALE SPLINE	LENGTH (INCHES)	EXTENDS TRACTOR P.T.O.		SECURED BY	PART NUMBER
			SHAFT END	SHAFT RETAINING GROOVE		
1 3/4-20	1 3/8-6	8 3/16	5 3/16	5 3/16	Clamp Type	0332-01476
1 3/4-20	1 3/8-21	8 3/16	5 3/16	5 11/16	Clamp Type	0332-01477



P.T.O. PRODUCTS

HEAVY-DUTY SPLINED ADAPTORS – TO 125 HP

For tractors with 1 3/4 - 20 Spline P.T.O.

⊗ SEE USAGE SAFETY WARNING ON PAGE Q4

FEMALE SPLINE	MALE SPLINE	LENGTH (INCHES)	EXTENDS TRACTOR P.T.O.		SECURED BY	PART NUMBER
			SHAFT END	SHAFT RETAINING GROOVE		
1 3/4-20	1 3/8-6	8 3/16	5 3/16	5 3/16	Clamp Type	0332-01490
1 3/4-20	1 3/8-21	8 3/16	5 3/16	5 11/16	Clamp Type	0332-01491



Q



FOR USER/OPERATOR SAFETY SEE
DETAILS PAGE Q-4

P.T.O. PRODUCTS

“FORGED” P.T.O. ADAPTOR – TO 75 HP

- 1 1/8 - 6 Spline female – 1 3/8 - 6 Spline male PART NO. 0332-00018
- “Forged” internal spline
- Universal quick-detach slot and bolt holes – can be used with any American, British or European P.T.O. system
- Furnished with 5/16 x 1 1/16 spring pin for direct connection to P.T.O.
- Overall length: 3 – extends P.T.O. 1 1/8



PUSH-PIN TYPE P.T.O. ADAPTORS – TO 75 HP

Quick Release Extension Adaptor

⊗ SEE USAGE SAFETY WARNING ON PAGE Q4

FEMALE SPLINE	MALE SPLINE	LENGTH (INCHES)	EXTENDS TRACTOR P.T.O.		PART NUMBER
			SHAFT END	SHAFT RETAINING GROOVE	
1 3/8-6	1 3/8-21	6 1/2	4 3/8	4 7/8	0332-00092
1 3/8-21	1 3/8-6	6 1/2	4 3/8	3 7/8	0332-01375
Repair Kit				Old Style	0335-90120
				New Style	0336-00182



ROUND SHAFT ADAPTORS – TO 75 HP

FEMALE ROUND	KEYWAY	MALE SPLINE	LENGTH	EXTENDS SHAFT	PART NUMBER
1	1/4	1 3/8-6	5 11/16	3 1/4	0332-00376
1 1/8	1/4	1 3/8-6	5 11/16	3 3/16	0332-00430
1 1/4	1/4	1 3/8-6	5 11/16	3 3/16	0332-00431
1 3/8	5/16	1 3/8-6	5 11/16	3 3/16	0332-00432
1 1/2	3/8	1 3/8-6	6 9/32	4	0332-00433



CLAMP TYPE P.T.O. ADAPTORS – TO 75 HP

⊗ SEE USAGE SAFETY WARNING ON PAGE Q4

FEMALE SPLINE	MALE SPLINE	LENGTH (INCHES)	EXTENDS TRACTOR P.T.O.		PART NUMBER
			SHAFT END	SHAFT RETAINING GROOVE	
1 1/8-6	1 3/8-6	7 5/16	4 5/8	4 5/8	0332-01354
1 3/8-6	1 3/8-6	6 1/2	4 3/8	4 3/8	0332-00057
1 3/8-21	1 3/8-6	6 1/2	4 3/8	3 7/8	0332-00087



SLEEVE TYPE SPLINED ADAPTORS – TO 75 HP

FEMALE SPLINE	MALE SPLINE	LENGTH (INCHES)	PART NUMBER	SPECIAL APPLICATIONS
3 1/32-10	1 3/8-6	2 1/4	0332-00355	IHC Cub & Kubota
1 1/8-6	1 3/8-6	2 1/4	0332-00352	
1 1/8-6	1 3/8-6	2	0332-00363	Replaced Ford 231082
1 3/8-6	1 3/4-6	2 1/2	0332-00403*	



* MANUFACTURED TO ORDER

CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST



FOR USER/OPERATOR SAFETY SEE
DETAILS PAGE Q-4



P.T.O. PRODUCTS

KWIK-D-TACH SPLINED PUMP DRIVE ADAPTORS

Same safe, dependable, fast action release as Kwik-D-Tach Splined Adaptors

⊗ SEE USAGE SAFETY WARNING ON PAGE Q4

FEMALE SPLINE	FEMALE ROUND**	KEYWAY	LENGTH(INCHES)	PART NUMBER
1 3/8-6	.625	3/16 X 3/32	4 1/8	0332-00012
1 3/8-6	.750	3/16 X 3/32	4 1/8	0332-00014
1 3/8-6	.875	3/16 X 3/32	4 1/8	0332-00011
1 3/8-6	.937	1/4 X 1/8	4 1/8	0332-00040
1 3/8-6	1.000	1/4 X 1/8	4 1/8	0332-00016
1 3/8-6	1.125	1/4 X 1/8	4 1/8	0332-00017

** NOMINAL + .002



SPLINED PUMP DRIVE ADAPTORS

1 3/8 - 21 Spline Pump Drives are supplied with setscrews

FEMALE SPLINE	FEMALE ROUND**	KEYWAY	LENGTH(INCHES)	PART NUMBER
1 1/8-6	1.000	1/4 X 1/8	3 1/16	0332-00412
1 3/8-6	.625	3/16 X 3/32	4 1/8	0332-00407
1 3/8-6	.750	3/16 X 3/32	4 1/8	0332-00408
1 3/8-6	.875	3/16 X 3/32	4 1/8	0332-00409
1 3/8-6	.937	1/4 X 1/8	4 1/8	0332-00413
1 3/8-6	1.000	1/4 X 1/8	4 1/8	0332-00410
1 3/8-6	1.125	1/4 X 1/8	4 1/8	0332-00411
1 3/8-21	.625	3/16 X 3/32	4 1/8	0332-00607
1 3/8-21	.750	3/16 X 3/32	4 1/8	0332-00608
1 3/8-21	.937	1/4 X 1/8	4 1/8	0332-00612
1 3/8-21	1.000	1/4 X 1/8	4 1/8	0332-00610
1 3/8-21	1.125	1/4 X 1/8	4 1/8	0332-00611*

** NOMINAL + .002

* MANUFACTURED TO ORDER



SPLINED WELD-ONS

DESCRIPTION	PART NUMBER
1 1/8-6 Spline, 5 1/4 Long	0332-00358
1 3/8-6 Spline, 5 1/2 Long	0332-00359
1 3/8-21 Spline, 5 1/2 Long	0332-00019



QUICK RELEASE WELD-ONS

⊗ SEE USAGE SAFETY WARNING ON PAGE Q4

DESCRIPTION	PART NUMBER
1 3/8-21 Spline, 3 5/16 Long	0332-01350*
1 3/8-6 Spline, 3 5/16 Long	0332-01345

* MANUFACTURED TO ORDER



CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST



FOR USER/OPERATOR SAFETY SEE
DETAILS PAGE Q-4

P.T.O. PRODUCTS

OVER-RUNNING COUPLERS

HUB CITY Over-Running Couplers provide a safe way to protect operators and machinery where inertia of driven units: e.g. rotary mowers, balers, hay conditioners, etc. can over-run driving source. They take the push out of

the driven machine and eliminate the chance of broken or twisted P.T.O. shafts. Over-Running Couplers drive solidly from tractor to driven implement, but over-run smoothly when implement exceeds P.T.O. speeds.

KWIK-D-TACH TRACTOR MODELS – TO 125 HP

- Patent applied for – pending serial No. U.S. 465 641 – Canadian 1 117 114
- Capacity to operate on tractors to 125 P.T.O. HP
- New P.T.O. Quick Release Concept – Spring Loaded – rotates about 30° by hand for quick release
- Designed to operate with 1000 RPM P.T.O.'s
- Installation and lubrication instructions enclosed with each coupler



⊗ SEE USAGE SAFETY WARNING ON PAGE Q4

FEMALE SPLINE	MALE SPLINE	LENGTH (INCHES)	EXTENDS TRACTOR P.T.O.		PART NUMBER
			SHAFT END	SHAFT RETAINING GROOVE	
1 3/8-6	1 3/8-6	7 5/16	4 3/16	5 3/16	0331-00010
1 3/8-6	1 3/8-21	7 3/16	4 11/16	5 3/16	0331-00011
1 3/8-21	1 3/8-6	7 5/16	5 5/16	5 3/16	0331-00012
1 3/8-21	1 3/8-21	7 3/16	5 3/16	5 3/16	0331-00013
Repair Kit					0337-00126

TRACTOR MODELS – TO 75 HP

Over-Running Couplers covered by Patent No. 3,233,471 – Canadian Patent No. 727-982

- All steel welded housing
- Heat treated alloy steel inner sleeve
- Hardened steel keys, spring loaded
- Snap ring construction for quick, easy disassembly for cleaning and service
- Spring roll pin for quick mounting to tractor
- Convenient grease fitting for gun lubrication
- Designed to operate with 1000 RPM P.T.O.'s



⊗ SEE USAGE SAFETY WARNING ON PAGE Q4

FEMALE SPLINE	MALE SPLINE	LENGTH (INCHES)	EXTENDS TRACTOR P.T.O.		FITS TRACTOR	PART NUMBER
			SHAFT END	SHAFT RETAINING GROOVE		
1 1/8-6	1 1/8-6	6 21/32	4 5/32	4 1/32	All with Cross Pin Hole Including Ford	0331-00690
1 1/8-6	1 3/8-6	6 21/32	4 5/32	4 1/32	All with Cross Pin Hole Including Ford	0331-00670
1 3/8-6	1 1/8-6	6 21/32	4 5/32	4 1/32	All with Cross Pin Hole Including Ford	0331-00680
1 3/8-6	1 3/8-6	6 21/32	4 5/32	4 1/32	All with Cross Pin Hole Including Ford	0331-00660
Repair Kit						0337-00076

INSTALLATION AND LUBRICATION INSTRUCTIONS ENCLOSED WITH EACH COUPLER.
FOR NON-PTO OVER-RUNNING COUPLERS, REFER TO PAGE Q15.

CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST



FOR USER/OPERATOR SAFETY SEE
DETAILS PAGE Q-11



NON P.T.O. PRODUCTS

NON P.T.O. PRODUCT SAFETY



For safety, purchaser or user must provide protective guards over all rotating shafts and any moving apparatus mounted thereon. The user is responsible for checking all applicable safety codes in his area and for the equipment utilizing this component, and providing suitable guards.

Buyer shall be solely responsible for determining the adequacy of this product for any and all uses to which the buyer shall apply this product. The application by the buyer shall not be subject to any implied warranty of fitness for a particular purpose. The purchaser/user of this component accepts responsibility for the above issues when removing the safety warning label from the component.



DO NOT OPERATE WITHOUT PROPER GUARDS. FAILURE TO GUARD CAN RESULT IN SERIOUS INJURY OR DEATH AND DAMAGE TO THE EQUIPMENT.

SQUARE BUSHING WELD-ONS

I.D.	O.D.	LENGTH (INCHES)	PART NUMBER
7/8 & 1 Square	1 3/4	2 1/4	0332-00360
1 1/8 Square	2	2 1/2	0332-00362
1 1/4 Square	2 1/4	2 1/2	0332-00364



NON P.T.O. PRODUCTS

SPROCKET REPAIR HUB FOR TRANSIT-MIXER

NO. OF SPLINES	SPLINE DESCRIPTION	SPLINE O.D.	SHOULDER O.D.	PILOT O.D.	PILOT LENGTH	O.A. LENGTH	PART NUMBER
23	8/16 INV.	3	4 1/2	4	1 15/32	3 5/64	0332-00045



Q



FOR USER/OPERATOR SAFETY SEE
DETAILS PAGE Q-11

NON P.T.O. PRODUCTS

SPLINED COUPLINGS

SPLINED SIZE	O.D.	LENGTH (INCHES)	PART NUMBER
$\frac{3}{4}$ -6	1 $\frac{3}{8}$	2 $\frac{1}{2}$	0332-00336
$\frac{7}{8}$ -6	1 $\frac{3}{8}$	2 $\frac{1}{2}$	0332-00337
$\frac{3}{16}$ -10 (IHC CUB & KUBOTA)	1 $\frac{3}{8}$	2 $\frac{3}{4}$	0332-00340
1-10	1 $\frac{3}{8}$	2 $\frac{1}{2}$	0332-00338
1-6	1 $\frac{3}{8}$	2 $\frac{3}{4}$	0332-00341
1 $\frac{1}{8}$ -6	1 $\frac{9}{16}$	2 $\frac{3}{4}$	0332-00344
1 $\frac{1}{4}$ -6	1 $\frac{7}{8}$	3 $\frac{1}{4}$	0332-00342
1 $\frac{1}{4}$ -10	1 $\frac{3}{4}$	3 $\frac{3}{4}$	0332-00348
1 $\frac{3}{8}$ -6	1 $\frac{3}{4}$	3 $\frac{3}{4}$	0332-00345
1 $\frac{3}{8}$ -10	1 $\frac{3}{4}$	3	0332-00365
1 $\frac{1}{2}$ -6	1 $\frac{7}{8}$	3 $\frac{3}{4}$	0332-00347
1 $\frac{1}{2}$ -10	1 $\frac{7}{8}$	3	0332-00367
1 $\frac{5}{8}$ -6	2	3 $\frac{3}{4}$	0332-00349
1 $\frac{3}{4}$ -6	2 $\frac{1}{4}$	3 $\frac{3}{4}$	0332-00346



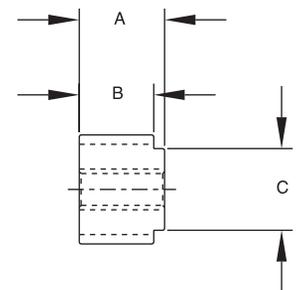
INVOLUTE SPLINED COUPLINGS

NO. OF SPLINES	SPLINE DESCRIPTION	SPLINE O.D.	COUPLING O.D.	COUPLING LENGTH	PART NUMBER
9	16/32 DP 30° PA	.625	1 $\frac{3}{8}$	2	0332-00027
11	16/32 DP 30° PA	.750	1 $\frac{3}{8}$	2	0332-00066
13	16/32 DP 30° PA	.875	1 $\frac{3}{8}$	3	0332-00028
15	16/32 DP 30° PA	1.000	1 $\frac{1}{2}$	3	0332-00043
14	12/24 DP 30° PA	1.250	1 $\frac{3}{4}$	3	0332-00029
21	16/32 DP 30° PA	1.375	1 $\frac{3}{4}$	3	0332-00350
20	12/24 DP 30° PA	1.750	2 $\frac{1}{4}$	3 $\frac{3}{4}$	0332-00320
13	8/16 DP 30° PA	1.750	2 $\frac{1}{4}$	3 $\frac{3}{4}$	0332-00030
27	16/32 DP 30° PA	1.750	2 $\frac{1}{4}$	3	0332-00351



HYDRAULIC REDUCER BUSHINGS

MALE SPLINE	FEMALE SPLINE	A	B	C	PART NUMBER
1 $\frac{3}{4}$ - 13T 8/16 DP, 30° PA	$\frac{5}{8}$ - 9T 16/32 DP, 30° PA	1 $\frac{3}{8}$	1 $\frac{7}{32}$	1 $\frac{5}{16}$	23-01531
1 $\frac{3}{4}$ - 13T 8/16 DP, 30° PA	$\frac{7}{8}$ - 13T 16/32 DP, 30° PA	1 $\frac{3}{8}$	1 $\frac{7}{32}$	1 $\frac{5}{16}$	23-01532
1 $\frac{3}{4}$ - 13T 8/16 DP, 30° PA	1 $\frac{1}{4}$ - 14T 12/24 DP, 30° PA	1 $\frac{7}{32}$	N/A	N/A	23-01533
1 $\frac{3}{4}$ - 13T 8/16 DP, 30° PA	1 - 15T 16/32 DP, 30° PA	1 $\frac{3}{8}$	1 $\frac{7}{32}$	1 $\frac{5}{16}$	23-01558
1 $\frac{1}{4}$ - 14T 12/24 DP, 30° PA	.625 Round $\frac{5}{32}$ x $\frac{5}{64}$ KW	1 $\frac{1}{8}$	N/A	N/A	0223-02150
1 $\frac{1}{4}$ - 14T 12/24 DP, 30° PA	$\frac{5}{8}$ - 9T 16/32 DP, 30° PA	1 $\frac{1}{8}$	N/A	N/A	0223-02149
1 $\frac{1}{4}$ - 14T 12/24 DP, 30° PA	$\frac{7}{8}$ - 13T 16/32 DP, 30° PA	1 $\frac{1}{8}$	N/A	N/A	0223-02148



CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST

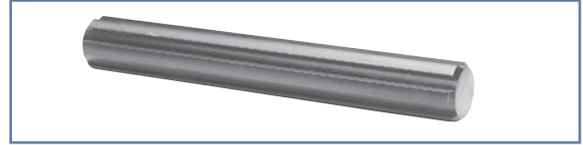


FOR USER/OPERATOR SAFETY SEE
DETAILS PAGE Q-11



NON P.T.O. PRODUCTS

SPLINED SHAFTS



SIZE	SPLINE	LENGTH (INCHES)	PART NUMBER
1	6	10	0332-00390
1 1/8	6	10	0332-00391
1 1/4	6	10	0332-00392
1 1/4	10	10	0332-00393
1 3/8	6	10	0332-00394
1 1/2	6	10	0332-00396
1 5/8	6	10	0332-00397
1 3/4	6	10	0332-00398

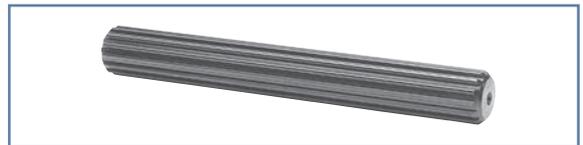
EXTENSION SHAFTS



SPLINE	SPLINE	LENGTH (INCHES)	PART NUMBER
1 3/8-6	1 3/8-6	9	0332-00356
1 3/8-6	1 1/8-6	9	0332-00357*

* MANUFACTURED TO ORDER

INVOLUTE SPLINED SHAFTS



NO. OF SPLINES	SPLINE DESCRIPTION	SPLINE O.D.	SHAFT LENGTH	PART NUMBER
9	16/32 DP 30° PA	.625	6	0332-00023
13	16/32 DP 30° PA	.875	6	0332-00024
15	16/32 DP 30° PA	1	8	0332-00044
14	12/24 DP 30° PA	1.25	10	0332-00025
21	16/32 DP 30° PA	1.375	10	0332-00395
26	20/40 DP 30° PA	1.358	10	0332-00414*
16	10/20 DP 30° PA	1.7	10	0332-00038*
13	8/16 DP 30° PA	1.75	10	0332-00026
27	16/32 DP 30° PA	1.75	10	0332-00399
34	20/40 DP 30° PA	1.750	10	0332-00415*
16	8/16 DP 30° PA	2.125	10	0332-00039

* MANUFACTURED TO ORDER

CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST



FOR USER/OPERATOR SAFETY SEE
DETAILS PAGE Q-11

NON P.T.O. PRODUCTS

ROUND BORE COUPLINGS

- Use to join two shafts
- Repair pulleys, gears, sprockets, etc.
- O.D. and I.D. concentricity not held to close limits
- If precision O.D. and I.D. concentricity is required, write for quotations
- Not drilled for setscrews



BORE SIZE	KEYWAY	O.D.	LENGTH(INCHES)	PART NUMBER
3/4	3/16	1 1/2	2 3/4	0332-00380
7/8	3/16	1 1/2	2 3/4	0332-00381
1	1/4	1 3/4	2 3/4	0332-00382
1 1/16	1/4	1 3/4	2 3/4	0332-00383*
1 1/8	1/4	2	3	0332-00384
1 3/16	1/4	2	3	0332-00385
1 1/4	1/4	2	3	0332-00386
1 5/16	5/16	2	3	0332-00387*
1 3/8	5/16	2 1/8	3	0332-00388
1 7/16	3/8	2 1/8	3	0332-00389
1 1/2	3/8	2 1/4	3	0332-00379

* MANUFACTURED TO ORDER

PRECISION SPLINED HUBS

- Designed for hydraulic motors
- Made from low alloy, high carbon steel
- Close tolerance O.D. and I.D. concentricity permits accurate mounting of sheave or sprocket
- Precision also permits accurate chucking for additional mounting



NO. OF SPLINES	SPLINE DESCRIPTION		SPLINE O.D.	HUB O.D.	LENGTH(INCHES)	PART NUMBER
6	6B	Str. Side	1.000	2.001/2.000	1 3/4	0332-00031
18	1.25 Module	20° PA	.984	1.751/1.750	1 3/4	0332-00085*
9	16/32 DP	30° PA	.625	1.251/1.250	1 1/4	0332-00032
11	16/32 DP	30° PA	.750	1.501/1.500	1 1/2	0332-00071
13	16/32 DP	30° PA	.875	1.501/1.500	1 1/2	0332-00033
15	16/32 DP	30° PA	1.000	1.751/1.750	1 3/4	0332-00072
21	16/32 DP	30° PA	1.375	2.251/2.250	2 1/8	0332-00035
17	12/24 DP	30° PA	1.500	2.251/2.250	2 1/4	0332-00093
23	16/32 DP	30° PA	1.500	2.251/2.250	2 1/8	0332-00073
27	16/32 DP	30° PA	1.750	3.001/3.000	2 1/4	0332-00075
14	12/24 DP	30° PA	1.250	2.251/2.250	2	0332-00034
16	10/20 DP	30° PA	1.700	2.751/2.750	2 1/4	0332-00036
13	8/16 DP	30° PA	1.750	3.001/3.000	2 1/4	0332-00074
16	8/16 DP	30° PA	2.125	3.501/3.500	2 3/16	0332-00037

* MANUFACTURED TO ORDER

CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST



FOR USER/OPERATOR SAFETY SEE
DETAILS PAGE Q-11



NON P.T.O. PRODUCTS

UTILITY MODELS – TO 75 HP

- Same construction as Standard-Duty Tractor Models
- For those applications other than tractor P.T.O. shafts, where the driven shaft overruns the driver occasionally or where one shaft must override or idle part of the time.
- Operating Speed to 1000 RPM



FEMALE SPLINE	MALE EXTENSION	PART NUMBER
1 1/4 Rd., 1/4 KW	1 1/4 Rd., 1/4 KW	0331-00615
Repair Kit		0337-00076

INSTALLATION AND LUBRICATION INSTRUCTIONS ENCLOSED WITH EACH COUPLER

UNIVERSAL MODELS– TO 75 HP

- Same construction as Standard-Duty Tractor Models
- Universal flange for mounting sheave or sprocket, has six 3/8" holes equally spaced on 4 1/4" Bolt Circle. Flange O.D. 5" – Hub O.D. 2 3/4"
- Operating Speed to 1000 RPM



FEMALE SLEEVE		PART NUMBER
I.D.	TYPE	
1 1/4	Round w/1/4 keyway	0331-00600
1 3/8	Round w/5/16 keyway	0331-00607
Repair Kit		0337-00082

MANUFACTURED TO ORDER. CONSULT FACTORY FOR PRICE AND DELIVERY.

SPECIAL OVER-RUNNING MODELS

Send us details of your special requirements!
We can design and manufacture to your order.
Pictured to the right is a special unit with sprocket welded to outer housing.



NON P.T.O. PRODUCTS

Q

CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST



FOR USER/OPERATOR SAFETY SEE
DETAILS PAGE Q-11

NON P.T.O. PRODUCTS

STROKE CONTROL SEGMENTS FOR HYDRAULIC CYLINDERS

- Cast iron segments for durability
- Rigidly attached spring with contoured handle permits installation and removal with one hand
- Universal: each segment assembly fits all shaft sizes 1 through 1 3/4 inches
- Large area parallel compression face of segments distribute cylinder clamping load over a greater area of the cylinder head and cylinder rod ends clevis to minimize possible cylinder damage
- Attached spring reduces loss of segment halves
- Provides 1/4 inch adjustments from 1 through 6 1/2 inches
- Can be ordered by sets or segments



SEGMENT COMBINATIONS

FOR STROKE REDUCTION (INCHES)	USE SEGMENT (INCHES)	FOR STROKE REDUCTION (INCHES)	USE SEGMENT (INCHES)
1	1	3 1/2	1, 1, 1 1/2
1 1/4	1 1/4	3 3/4	1, 1 1/4, 1 1/2
1 1/2	1 1/2	4	1, 1 1/4, 1 3/4
1 3/4	1 3/4	4 1/4	1, 1 1/2, 1 3/4
2	1, 1	4 1/2	1 1/4, 1 1/2, 1 3/4
2 1/4	1, 1 1/4	4 3/4	1, 1, 1 1/4, 1 1/2
2 1/2	1, 1 1/2	5	1, 1, 1 1/4, 1 3/4
2 3/4	1, 1 3/4	5 1/4	1, 1, 1 1/2, 1 3/4
3	1 1/4, 1 3/4	5 1/2	1, 1 1/4, 1 1/2, 1 3/4
3 1/4	1 1/2, 1 3/4	6 1/2	1, 1, 1 1/4, 1 1/2, 1 3/4

SET OF 5 SEGMENTS	WEIGHT (LBS.) 7.7	PART NUMBER 0339-80000
Set Includes: 2 - 1 In. Segments	1.2	0339-80001
1 - 1 1/4 In. Segment	1.4	0339-80002
1 - 1 1/2 In. Segment	1.8	0339-80003
1 - 1 3/4 In. Segment	2.1	0339-80004

CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST



FOR USER/OPERATOR SAFETY SEE
DETAILS PAGE Q-4

MODEL 330 PUMP DRIVE

- Two standard ratios available
- Increases 540 or 1000 RPM tractor P.T.O. speed to 1825 RPM to facilitate use of a smaller, less expensive hydraulic pump
- Fits most standard SAE hydraulic pumps having SAE B or C mounting flange
- Easy installation and removal on most standard tractor P.T.O. shafts
- Torque arm bracket furnished as standard equipment
- Rugged cast aluminum housing
- All steel alloy gears
- High strength alloy shafts
- Off-the-shelf delivery
- Rated for pumps requiring up to 45 HP at 540 RPM and 65 HP at 1000 RPM



With the new HUB CITY Series 330 Pump Drive, it is now possible to increase either 540 RPM or 1000 RPM tractor P.T.O. speed to 1825 RPM to permit use of a similar, less expensive hydraulic pump for your implements.

Two flange sizes are available: SAE B and C, for use with standard SAE pumps.

Also, both spline and round shafts are available in several sizes to suit your pump adaptation requirements.

CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST

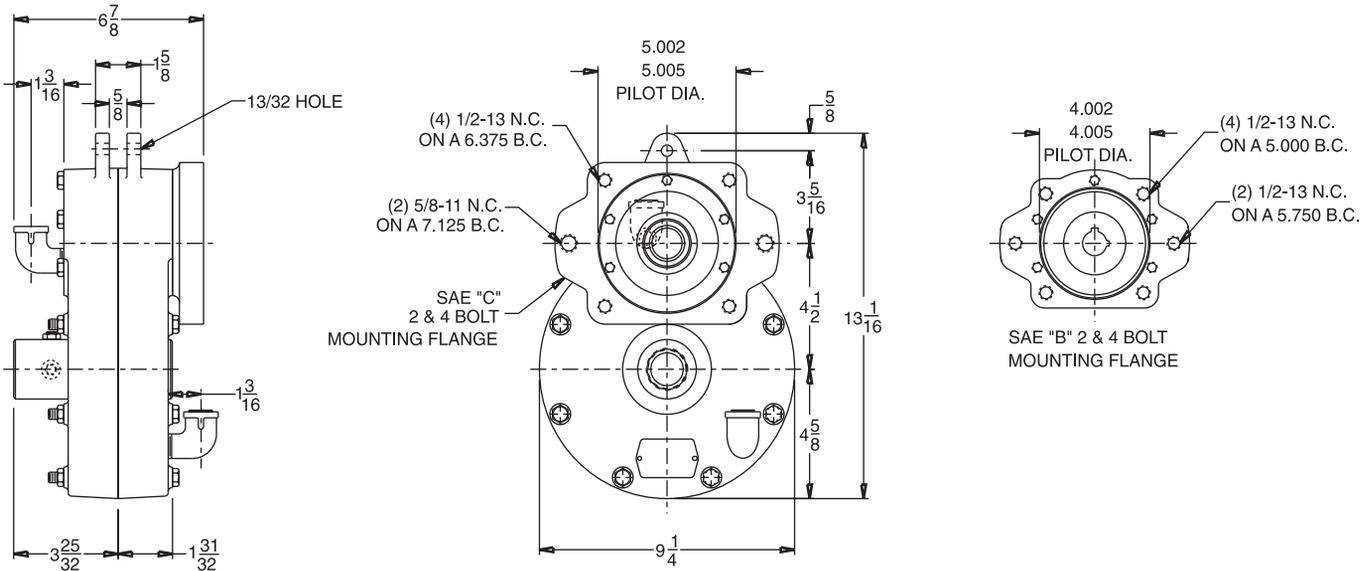


FOR USER/OPERATOR SAFETY SEE
DETAILS PAGE Q-4



MODEL 330 PUMP DRIVE

DIMENSIONS



SPECIFICATIONS

PART NUMBER	SAE ADAPTOR	PUMP SLEEVE			OPERATING SPEED	
		NUMBER SPLINES	SPLINE/KEYWAY	SPLINE OR BORE I.D.	TRACTOR*	PUMP
0220-06110	B	Keyway	$\frac{3}{16} \times \frac{3}{32}$ KW $\frac{1}{4} \times \frac{1}{8}$ KW	.875	540 RPM	1825 RPM
0220-06104	B	Keyway	$\frac{1}{4} \times \frac{1}{8}$ KW	.875	1000 RPM	1825 RPM
0220-06109	B	13	16/32 DP 30° PA	.875	540 RPM	1825 RPM
0220-06103	B	13	16/32 DP 30° PA	.875	1000 RPM	1825 RPM
0220-06117	B	14	12/24 DP 30° PA	1.250	540 RPM	1825 RPM
0220-06112	C	Keyway	$\frac{5}{16} \times \frac{5}{32}$ KW	1.250	540 RPM	1825 RPM
0220-06106	C	Keyway	$\frac{5}{16} \times \frac{5}{32}$ KW	1.250	1000 RPM	1825 RPM
0220-06111	C	14	12/24 DP 30° PA	1.250	540 RPM	1825 RPM
0220-06105	C	14	12/24 DP 30° PA	1.250	1000 RPM	1825 RPM

* INPUT DESIGNED FOR 1 3/8 P.T.O. SHAFT ONLY

540 RPM TRACTOR 1 3/8 - 6 SPLINE
 1000 RPM TRACTOR 1 3/8 - 21 SPLINE

FOR LUBRICATION AND INSTALLATION
 INSTRUCTIONS REFER TO SECTION R.

CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST

CALL: (605) 225-0360 • FAX: (605) 225-0567

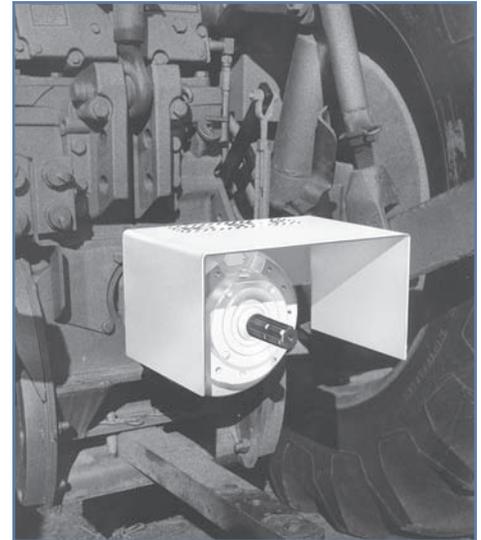


FOR USER/OPERATOR SAFETY SEE
DETAILS PAGE Q-4

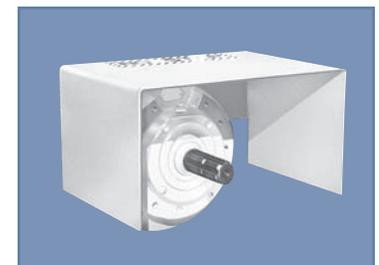
MODEL 390 P.T.O. SPEED CHANGER

Adapts up to 125 HP tractor to all P.T.O. operated field equipment

- Unit takes input horsepower up to 125 @ 1000 rpm!
- Alloy steel, heat treated gears don't shy away from jolts and shock loads
- Rugged, cast iron housing protects the unit for long, trouble free service
- Tapered roller bearings give quiet performance and long life
- Double lip, spring loaded seals keep lubricant where it belongs
- Alloy shaft and spline sleeve add to strength and dependability
- Unit minimizes P.T.O. shaft overhung load and drive line angularity
- Minimum offset between tractor P.T.O. and speed changer extension minimizes drive line adjustment
- Easily installed and removed
- Two (2) ratios to fit most applications
- Safety shield included
- Permanently lubricated at factory



ASSEMBLY NO.	0220-06206-390	0220-06207-390	0220-06208-390
Ratio	1.89:1 Reducer	1:1.89 Increaser	1.89:1 Reducer
Tractor RPM	1000	540	1000
Drive Line RPM	540	1000	540
Female Spline	1 ³ / ₈ -21 Inv.	1 ³ / ₈ -6B	1 ³ / ₄ -20 Inv.
Male Spline	1 ³ / ₈ -6B	1 ³ / ₈ -21 Inv.	1 ³ / ₈ -6B
C.D. Center Distance	1.60	1.60	1.60
A	8 ¹ / ₈	7 ⁵ / ₈	8 ¹¹ / ₃₂
B	9 ¹ / ₂	9 ¹ / ₂	9 ¹ / ₂
C	5 ³ / ₄	5 ³ / ₄	5 ³ / ₄
D	11 ¹ / ₈	11 ¹ / ₈	11 ¹ / ₈
E	4 ¹ / ₄	3 ⁹ / ₁₆	4 ¹ / ₄
F P.T.O. Ext.	11 ⁵ / ₈	10 ¹⁵ / ₁₆	10 ³¹ / ₃₂
G	14 ⁵ / ₈	13 ¹⁵ / ₁₆	14 ²⁷ / ₃₂
H	10 ³ / ₈	9 ³ / ₈	10 ¹⁹ / ₃₂
I	1 ¹ / ₁₆	1	1 ⁵ / ₁₆
J	5 ³ / ₈	5 ³ / ₈	5 ³ / ₈
K	10 ³ / ₄	10 ³ / ₄	10 ³ / ₄
L	5 ³ / ₄	5 ³ / ₄	5 ³ / ₄
M	13 ¹ / ₈	13 ¹ / ₈	13 ¹ / ₈
N	7 ⁷ / ₈	7 ⁷ / ₈	7 ⁷ / ₈
O	6 ⁹ / ₃₂	7 ⁷ / ₈	6 ⁹ / ₃₂



FOR LUBRICATION AND INSTALLATION INSTRUCTIONS REFER TO SECTION R.

IMPORTANT: THE MODEL 390 P.T.O. SPEED CHANGERS CAN BE MOUNTED ON MOST TRACTOR P.T.O. SHAFTS, HOWEVER, THEY CANNOT BE MOUNTED ON TRACTORS THAT DO NOT HAVE DETACHABLE P.T.O. SHIELDS. UNITS MUST BE USED IN AN APPROVED MOUNTING POSITION WITH THE TORQUE ARM BRACKET ALSO IN AN APPROVED POSITION (SEE PAGE 21) OTHERWISE EXCESSIVE SIDE LOADING WILL BE EXERTED ON THE TRACTOR P.T.O. SHAFT. THE TORQUE ARM MUST ALWAYS BE POSITIONED AT 90° TO THE TORQUE ARM BRACKET. TO DETERMINE IF THE MODEL 390 WILL MOUNT ON A SPECIFIC TRACTOR USE THE OUTLINE ON PAGE 21 AND THE DIMENSIONS SHOWN ON THIS PAGE.

CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST



FOR USER/OPERATOR SAFETY SEE
DETAILS PAGE Q-4



MODEL 390 P.T.O. SPEED CHANGER

APPROVED MOUNTING POSITIONS

P.T.O. SPEED REDUCER
(VIEWED FROM REAR OF TRACTOR)

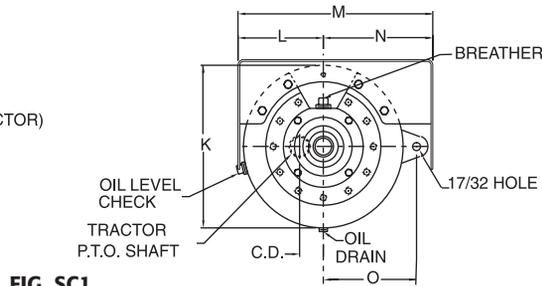


FIG. SC1

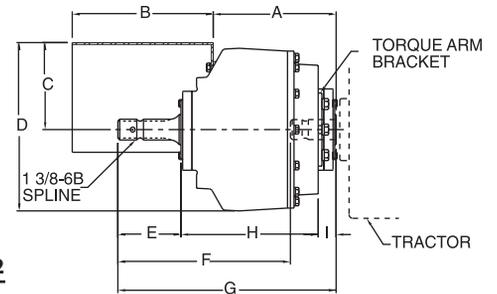


FIG. SC2

P.T.O. SPEED INCREASER
(VIEWED FROM REAR OF TRACTOR)

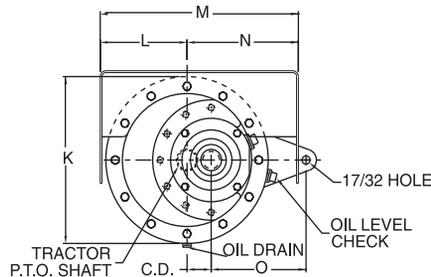


FIG. SC3

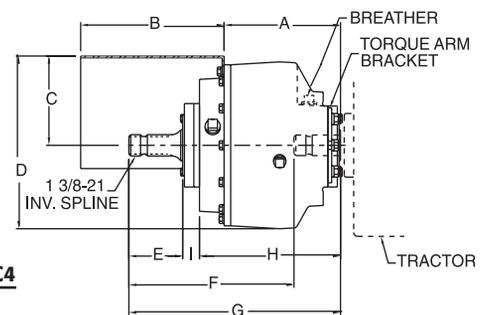


FIG. SC4

P.T.O. SPEED REDUCER
ALTERNATE MOUNTING
(VIEWED FROM REAR OF TRACTOR)

SEE SERVICE PARTS MANUAL FOR
APPROVED MOUNTING POSITIONS

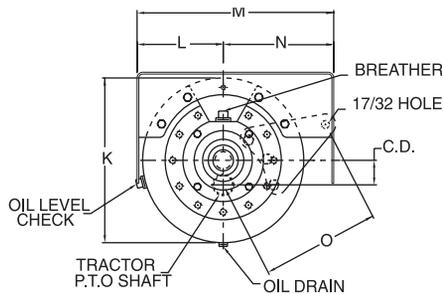


FIG. SC5

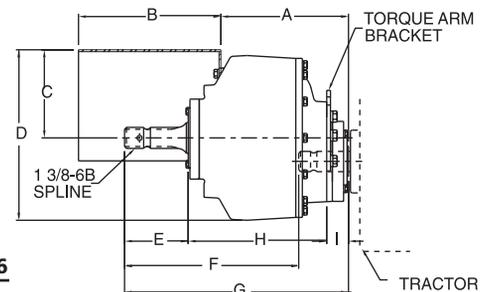


FIG. SC6

APPROVED TORQUE ARM BRACKET POSITIONS

P.T.O. SPEED REDUCER
(VIEWED FROM TRACTOR SIDE)

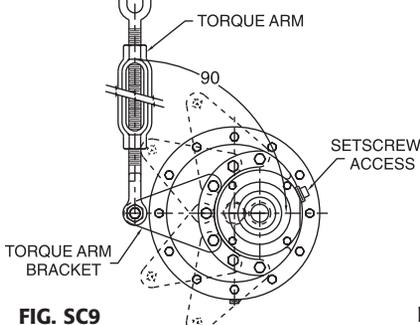


FIG. SC9

P.T.O. SPEED INCREASER
(VIEWED FROM TRACTOR SIDE)

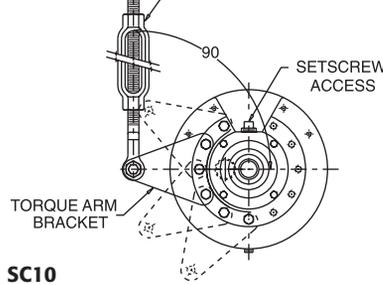


FIG. SC10

P.T.O. SPEED REDUCER
ALTERNATE MOUNTING
(VIEWED FROM TRACTOR SIDE)

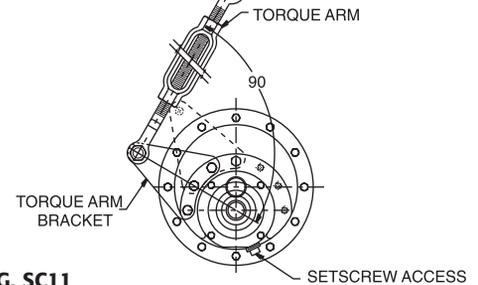


FIG. SC11

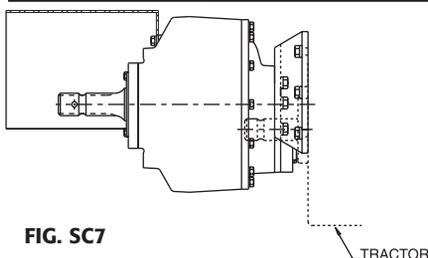


FIG. SC7

P.T.O. SPEED REDUCER
ALTERNATE MOUNTING BRACKET
BRACKET FURNISHED BY CUSTOMER

CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST

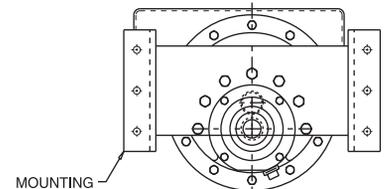


FIG. SC8

(VIEWED FROM FRONT OF TRACTOR)





SHIPPING WEIGHTS & INDEX

PART NUMBER	WT.(LBS.)	PAGE	PART NUMBER	WT.(LBS.)	PAGE	PART NUMBER	WT.(LBS.)	PAGE
02-20-06206-390	110	Q-20	03-32-00043	0.8	Q-12	03-32-00391	2.3	Q-13
02-20-06207-390	110	Q-20	03-32-00044	1.6	Q-13	03-32-00392	2.8	Q-13
02-20-06208-390	110	Q-20	03-32-00045	6.2	Q-11	03-32-00393	3	Q-13
02-20-06103-330	35	Q-19	03-32-00057	1.5	Q-8	03-32-00394	3.5	Q-13
02-20-06104-330	35	Q-19	03-32-00066	0.8	Q-12	03-32-00395	3.8	Q-13
02-20-06105-330	35	Q-19	03-32-00070	3.5	Q-6	03-32-00396	4.3	Q-13
02-20-06106-330	35	Q-19	03-32-00071	0.5	Q-14	03-32-00397	5.2	Q-13
02-20-06109-330	35	Q-19	03-32-00072	0.5	Q-14	03-32-00398	5.8	Q-13
02-20-06110-330	35	Q-19	03-32-00073	1.5	Q-14	03-32-00399	6.2	Q-13
02-20-06111-330	35	Q-19	03-32-00074	1.5	Q-14	03-32-00400	2.3	Q-6
02-20-06112-330	35	Q-19	03-32-00075	1.5	Q-14	03-32-00401	3.5	Q-6
02-20-06117-330	35	Q-19	03-32-00084	1.5	Q-6	03-32-00403	0.5	Q-8
02-23-02148-330	0.5	Q-12	03-32-00085	1.2	Q-14	03-32-00407	1.5	Q-9
02-23-02149-330	0.5	Q-12	03-32-00086	0.5	Q-7	03-32-00408	1.5	Q-9
02-23-02150-330	0.5	Q-12	03-32-00087	1.5	Q-8	03-32-00409	1.5	Q-9
23-01531	0.5	Q-12	03-32-00092	2.5	Q-8	03-32-00410	1.3	Q-9
23-01532	0.5	Q-12	03-32-00093	2	Q-14	03-32-00411	1.3	Q-9
23-01533	0.5	Q-12	03-32-00094	6	Q-6	03-32-00412	1.5	Q-9
23-01558	0.5	Q-12	03-32-00320	2	Q-12	03-32-00413	1.5	Q-9
03-31-00010	7.5	Q-10	03-32-00336	1	Q-12	03-32-00414	1.5	Q-13
03-31-00011	7.5	Q-10	03-32-00337	0.8	Q-12	03-32-00415	1.5	Q-13
03-31-00012	7.5	Q-10	03-32-00338	0.8	Q-12	03-32-00420	1.8	Q-6
03-31-00013	7.5	Q-10	03-32-00340	0.8	Q-12	03-32-00430	1.8	Q-8
03-31-00600	6	Q-15	03-32-00341	0.8	Q-12	03-32-00431	1.8	Q-8
03-31-00607	6	Q-15	03-32-00342	1.5	Q-12	03-32-00432	1.8	Q-8
03-31-00615	6	Q-15	03-32-00344	0.8	Q-12	03-32-00433	1.8	Q-8
03-31-00660	6	Q-10	03-32-00345	1	Q-12	03-32-00607	1.5	Q-9
03-31-00670	6	Q-10	03-32-00346	1.8	Q-12	03-32-00608	1.5	Q-9
03-31-00680	6	Q-10	03-32-00347	1.3	Q-12	03-32-00610	1.3	Q-9
03-31-00690	6	Q-10	03-32-00348	1.3	Q-12	03-32-00611	1.5	Q-9
03-32-00001	6	Q-6	03-32-00349	1.3	Q-12	03-32-00612	1.5	Q-9
03-32-00002	6	Q-6	03-32-00350	1	Q-12	03-32-01345	1.3	Q-9
03-32-00004	6	Q-6	03-32-00351	1.5	Q-12	03-32-01350	1.3	Q-9
03-32-00005	6	Q-6	03-32-00352	0.3	Q-8	03-32-01354	1.5	Q-8
03-32-00010	2.3	Q-7	03-32-00355	0.5	Q-8	03-32-01373	2.5	Q-7
03-32-00011	2	Q-9	03-32-00356	3.3	Q-13	03-32-01375	2.5	Q-8
03-32-00012	2	Q-9	03-32-00357	3	Q-13	03-32-01476	7	Q-7
03-32-00013	2	Q-7	03-32-00358	1.5	Q-9	03-32-01477	7	Q-7
03-32-00014	2	Q-9	03-32-00359	2.3	Q-9	03-32-01490	7	Q-7
03-32-00015	2	Q-7	03-32-00360	1	Q-11	03-32-01491	7	Q-7
03-32-00016	1.8	Q-9	03-32-00362	1.3	Q-11	03-32-02121	2.5	Q-7
03-32-00017	1.8	Q-9	03-32-00363	0.3	Q-8	03-32-03531	1.8	Q-6
03-32-00018	0.8	Q-8	03-32-00364	1.5	Q-11	03-34-00028	9	Q-17
03-32-00019	2.3	Q-9	03-32-00365	1	Q-12	03-34-00035	9	Q-17
03-32-00023	0.5	Q-13	03-32-00367	1.3	Q-12	03-34-00042	11	Q-17
03-32-00024	0.8	Q-13	03-32-00371	2.5	Q-6	03-34-00043	11	Q-17
03-32-00025	3	Q-13	03-32-00373	2.8	Q-6	0335-90120	0.5	Q-8
03-32-00026	5.8	Q-13	03-32-00376	1.8	Q-8	0336-00182	0.5	Q-8
03-32-00027	0.8	Q-12	03-32-00377	1.8	Q-6	03-37-00076	0.8	Q-10&Q-15
03-32-00028	0.8	Q-12	03-32-00378	1.8	Q-6	03-37-00082	0.8	Q-15
03-32-00029	1	Q-12	03-32-00379	1.8	Q-14	03-37-00126	0.5	Q-10
03-32-00030	2	Q-12	03-32-00380	1	Q-14	03-39-80000	7.7	Q-16
03-32-00031	1.2	Q-14	03-32-00381	1	Q-14	03-39-80001	1.2	Q-16
03-32-00032	0.3	Q-14	03-32-00382	1.3	Q-14	03-39-80002	1.4	Q-16
03-32-00033	0.5	Q-14	03-32-00383	1.3	Q-14	03-39-80003	1.8	Q-16
03-32-00034	1.5	Q-14	03-32-00384	1.8	Q-14	03-39-80004	2	Q-16
03-32-00035	2	Q-14	03-32-00385	1.8	Q-14	8-58-00-01-009	2	R-28 & R-29
03-32-00036	2.5	Q-14	03-32-00386	1.5	Q-14	8-58-00-01-011	2	R-28 & R-29
03-32-00037	5.2	Q-14	03-32-00387	1.5	Q-14	8-58-00-01-024	2	R-28 & R-29
03-32-00038	6.2	Q-13	03-32-00388	1.8	Q-14	8-58-00-01-031	2	R-28 & R-29
03-32-00039	9	Q-13	03-32-00389	1.5	Q-14			
03-32-00040	2	Q-9	03-32-00390	1.3	Q-13			