

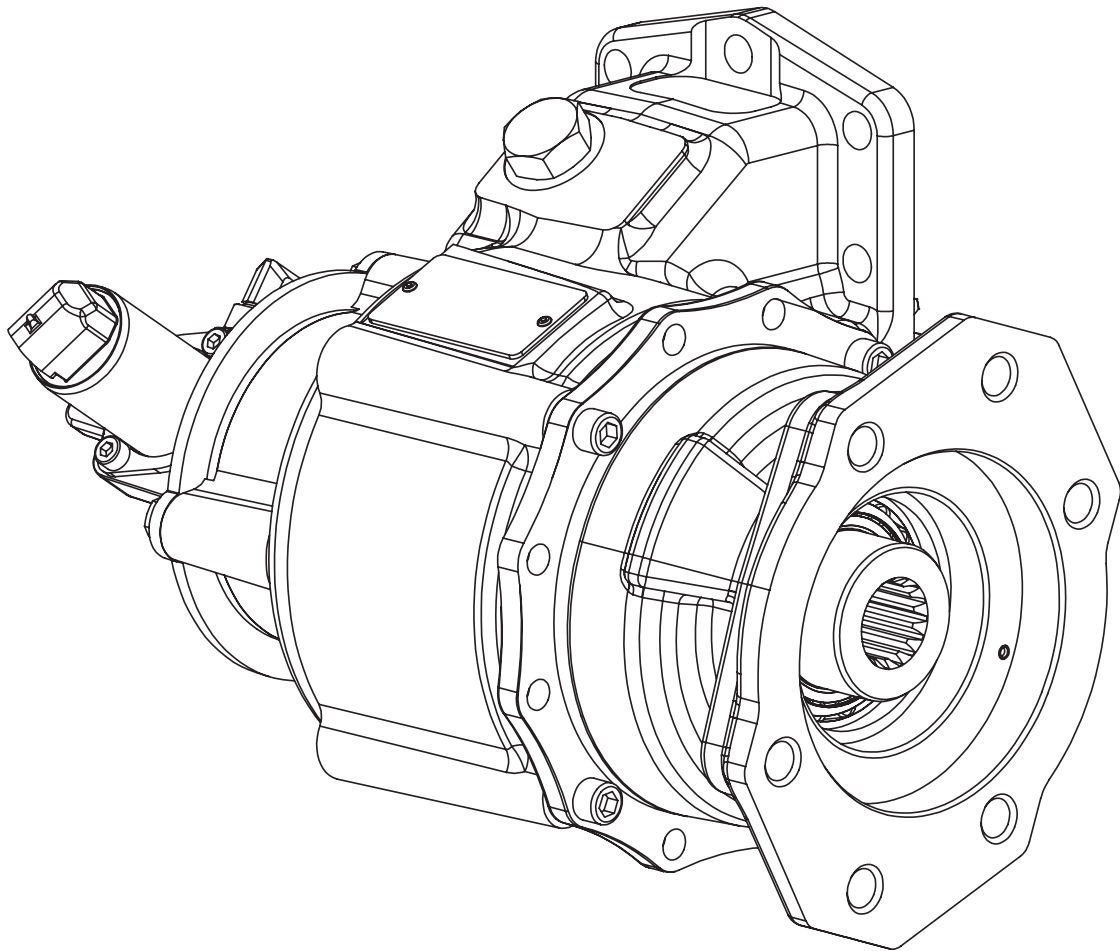


Muncie®
Power
Products

TITAN® MC1 SERIES

POWER TAKE-OFF

PARTS LIST AND SERVICE MANUAL



MODEL NUMBER CONSTRUCTION

MC1 - A10 07 - HX 3 BB PX

PTO Series:

MC1 – Medium Duty Clutch Shift 10-Bolt

Transmission Gear:

A10 – Allison 3000/4000 Series

Internal Gear Ratio:

- 05 – .54:1 Output Speed
- 06 – .63:1
- 07 – .73:1
- 08 – .84:1
- 09 – .90:1
- 10 – .97:1
- 11 – 1.10:1
- 12 – 1.19:1
- 15 – 1.48:1

Shift Type:

- HX – Elec/Hyd 12 V
- HR – Elec/Hyd 12 V Remote Mount
- JX – Elec/Hyd 24 V
- JR – Elec/Hyd 24 V Remote Mount
- XX – Elec/Hyd w/o Activation Components
- SX – Muncie Start 12 V
- SR – Muncie Start 12 V Remote Mount
- HH – Elec/Hyd 12 V Hino

Assembly Arrangement:

- 1 – Right Side Shaft Low
- 3 – Left Side Shaft Low
- 5 – Top/No Offset (Straight Out From Opening)

Output Type (*Wet Spline):

- 1X – 1¼" Round Shaft
- 2I – DIN 5462 Euro
- AA – SAE "A" ⅝" -9T, 2-Bolt SAE-"A"
- B6* – SAE "B" ⅞" -13T, 2-Bolt SAE-"B" Special
- BA* – SAE "B" ⅞" -13T, 2-Bolt SAE-"A"
- BB* – SAE "B" ⅞" -13T, 2- & 4-Bolt SAE-"B"
- BS* – SAE "B" ⅞" -13T, 2-Bolt SAE-"B"
- CB* – SAE "C" 1¼" -14T, SAE-"B"
- CC* – SAE "C" 1¼" -14T, 2- & 4-Bolt SAE-"C"
- II – DIN 5462
- PS* – SAE "BB" 1" -15T, 2-Bolt SAE-"B"
- P6 – SAE "BB" 1" -15,T 2-Bolt SAE-"B" Special
- PB* – SAE "BB" 1" -15,T 2- & 4-Bolt SAE-"B"
- TA – SAE ¾" -11T, 2-Bolt SAE-"A"
- X2 – 1½" 10T, DIN Companion
- X4 – 1½" 10T Male, 1410 Companion
- XX – 1½" 10T Male, No Flange
- ZB – SAE "C" 1.25" -14T, 2- & 4-BOLT SAE "B"

Special Features:

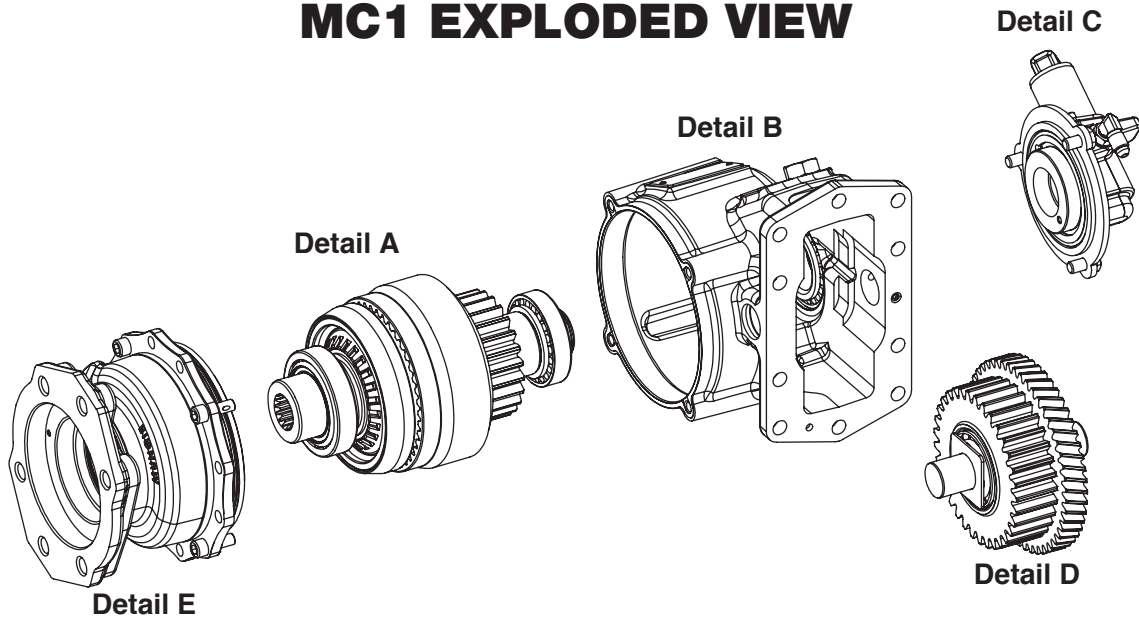
- PX – Standard Hose Kit
- PW – Wet Spline w/Standard Hose Kit
- BX – Top Opening Output Cover & Hose Kit
- BW – Top Opening Wet Spline Output Cover & Hose Kit
- US – Pulse Generator & SPD-1001
- UX – Pulse Generator & Standard Hose Kit
- UB – Top Opening Output Cover & Hose Kit w/Pulse Generator
- XX – Hose Delete Kit

NOTE:

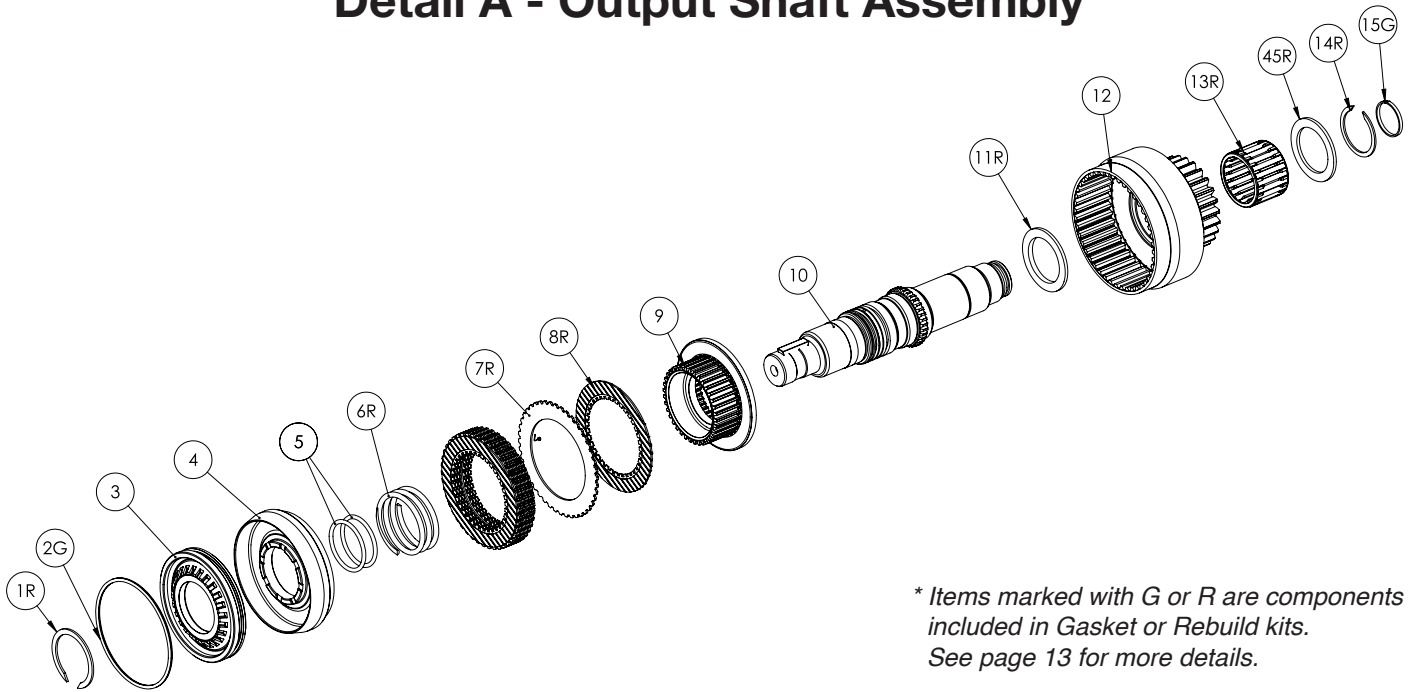
*Wet Spline Option Available

Other MC1 Literature	
IN16-07	Installation Instructions
IN17-03	Standard Activation Instructions
IN17-09	Muncie Start® Activation Instructions
IN17-04	Operator's Manual
IN17-05	Hino Installation Instructions
IN18-05	Rebuild Instructions

MC1 EXPLODED VIEW



Detail A - Output Shaft Assembly

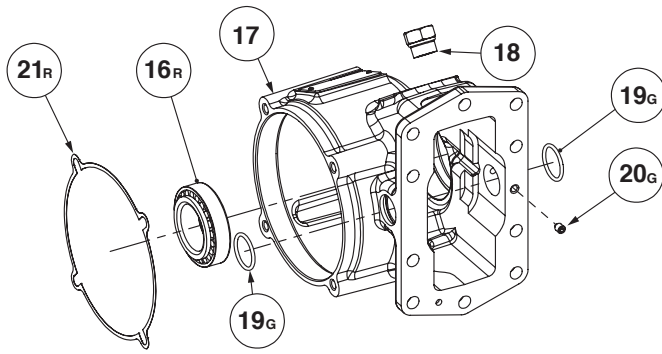


* Items marked with G or R are components included in Gasket or Rebuild kits. See page 13 for more details.

ITEM	QTY	PART NO.	DESCRIPTION
1	1	12T43296	Snap Ring
2	1	12T36472	O-Ring
3	1	49TA6338	Piston
4	1	49T43298	Piston Cup
5	2	12T36869	O-Ring
6	1	27T36112	Piston Return Spring
7	7	49T40641	Spacer Disc
8	8	49T33564	Friction Disc
9	1	02T43059	Clutch Hub
10	1	06T43103	Comp Flange Shaft
		06T43104	SAE B 7/8" -13T Shaft
		06T43105	SAE C 1.25" -14T Shaft
		06T43106	DIN 5462 8T Shaft
		06T43107	SAE BB 1.0" -15T Shaft
		06T43108	1.25" RD w/5/16" Key

ITEM	QTY	PART NO.	DESCRIPTION
11	1	21T63014	Stepped Thrust Washer
12	1	02TA6070	Output Gear 05 Ratio 37T
		02TA6069	Output Gear 06 Ratio 35T
		02TA6068	Output Gear 07 Ratio 33T
		02TA6067	Output Gear 08 Ratio 31T
		02TA6066	Output Gear 09 Ratio 30T
		02TA6065	Output Gear 10 Ratio 29T
		02TA6064	Output Gear 11 Ratio 28T
		02TA6063	Output Gear 12 Ratio 26T
13	1	10T43603	Needle Bearing
14	1	12T43295	Snap Ring
15	1	12T42978	Shaft Seal
45	1	21T43294	Thrust Washer

Detail B - Housing Assembly

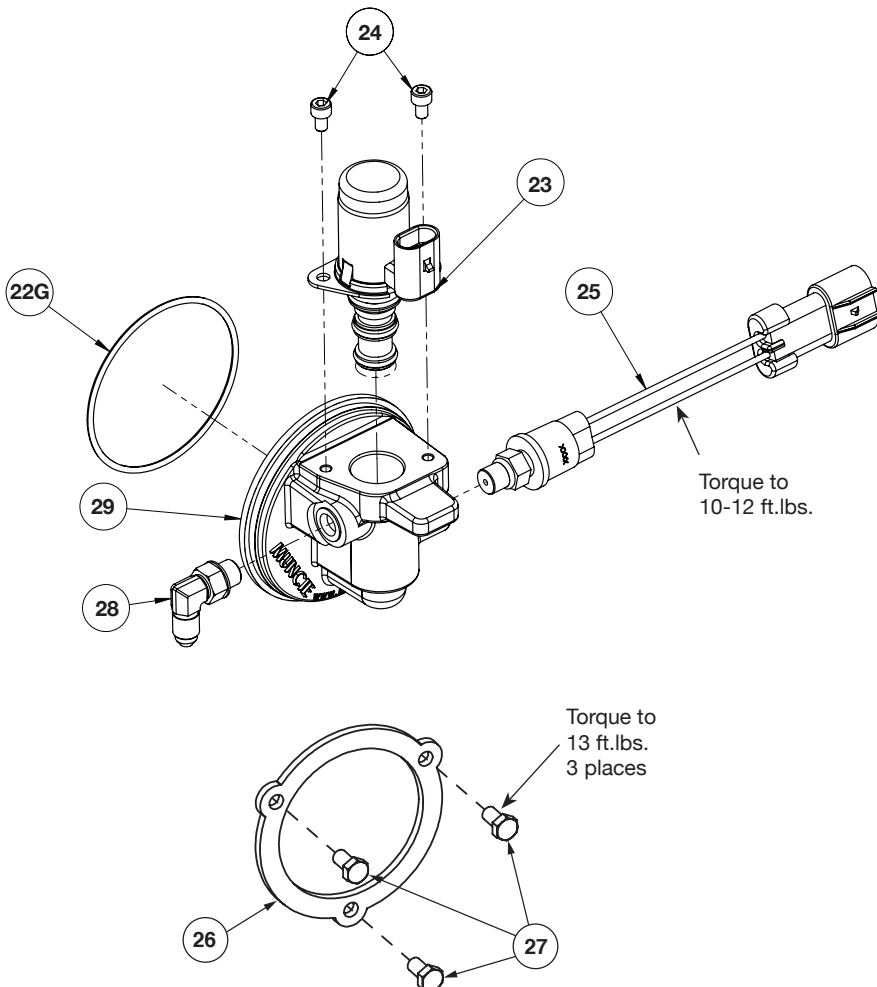


Shaft end play must be set between 0.001" - 0.005"

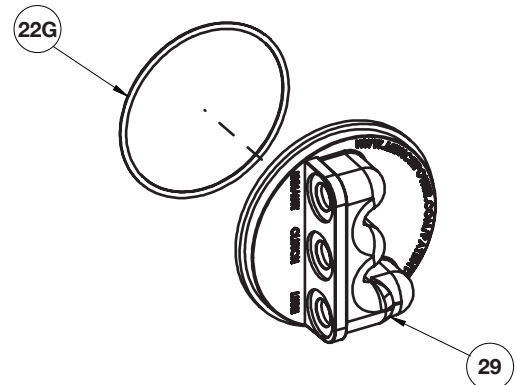
ITEM	QTY	PART NO.	DESCRIPTION
16	1	10T43098	Tapered Roller Bearing
17	1	01T43462	Housing – 1 Arrangement
		01T43433	Housing – 3 Arrangement
		01T43513	Housing – 5 Arrangement
18	1	25T35999	Plug
19	2	12T39023	O-Ring
20	1	19T36082	Set Screw
21	1	18TK6341 (Shim Kit includes listed shims)	Shim; .003" (Green)
			Shim; .005" (Blue)
			Shim; .010" (Brown)
			Shim; .015" (Pink)
			Shim; .020" (Yellow)
			Shim; .025" (White)
			Shim; .030" (Orange)

Detail C - Rear Cover Assembly

Integral Solenoid Rear Cover

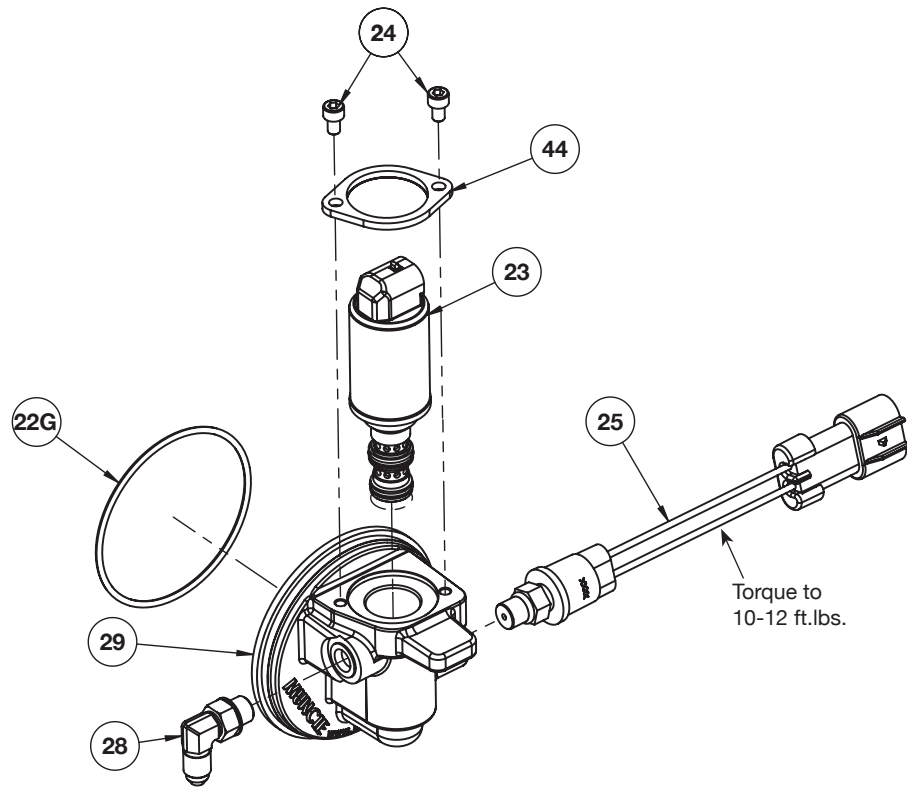


Remote Mount Solenoid Cover



Detail C - Rear Cover Assembly continued

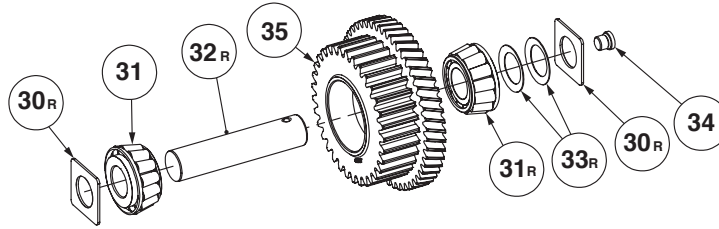
Muncie Start Rear Cover



Note: Units built before 4-25-2020 and Muncie Start Units

ITEM	QTY	PART NO.	DESCRIPTION
22	1	12T36701	O-Ring
23	1	35T40860	12 V Solenoid Valve – Std.
		35T40864	24 V Solenoid Valve
		35T43600	12 V Solenoid Valve (Used on units built before 4/25/2020)
		35T43601	24 V Solenoid Valve – Std.
		35T62496	12 V Solenoid – Muncie Start®
24	2	19T62950	Solenoid Cap Screw
		19T40859	Solenoid Cap Screw (Used with 35T40860 & 35T40864)
25	1	30T60223	Pressure Switch
26	1	49T43434	Valve Body Lock Ring
27	3	19T33233	Cap Screw
28	1	43M68014	Elbow Fitting
29	1	15T43431	Integral Sol. Rear Cover (Used on units built before 4/25/2020)
		15T62444	Integral Solenoid Muncie Start Cover
		15T61745	Remote Mt. Sol. Cover
		15T61093	Integral Solenoid Rear Cover
44	1	49T62436	Clamp Ring (Used on units built before 4/25/2020)

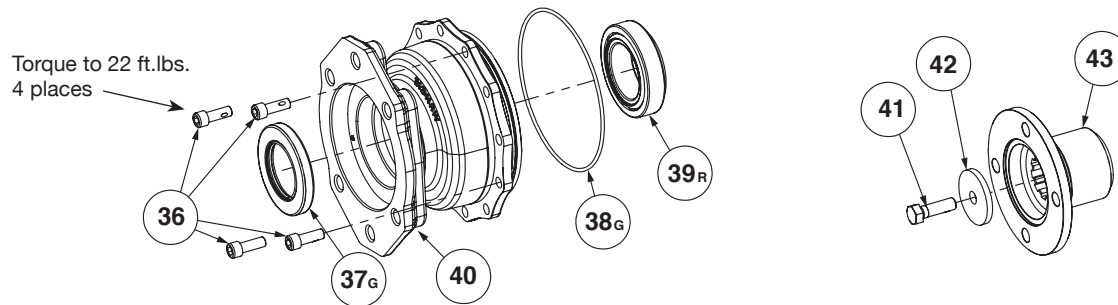
Detail D - Input Gear Assembly



ITEM	QTY	PART NO.	DESCRIPTION
30	2	18T42642	Square Washer
31	2	10T43096	Input Bearing (07-15 Ratios)
		10T43287	Input Bearing (05/06 Ratios)
32	1	07T43110	Idler Shaft
33	2	27T43291	Belleville Washer
34	1	25T41463	Plug

ITEM	QTY	PART NO.	DESCRIPTION
35	1	03T43085	Input Gear 05 Ratio 20T/50T
		03T43084	Input Gear 06 Ratio 22T/50T
		03T43083	Input Gear 07 Ratio 24T/50T
		03T43082	Input Gear 08 Ratio 26T/50T
		03T43081	Input Gear 09 Ratio 27T/50T
		03T43080	Input Gear 10 Ratio 28T/50T
		03T43086	Input Gear 11 Ratio 31T/50T
		03T43087	Input Gear 12 Ratio 31T/50T
		03T43077	Input Gear 15 Ratio 34T/50T

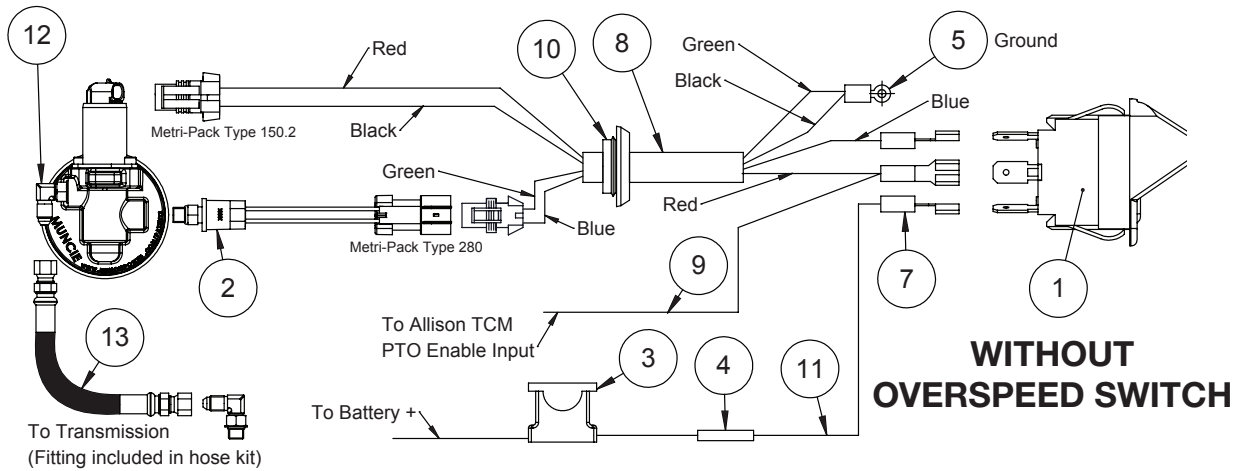
Detail E - Output Cover Assembly



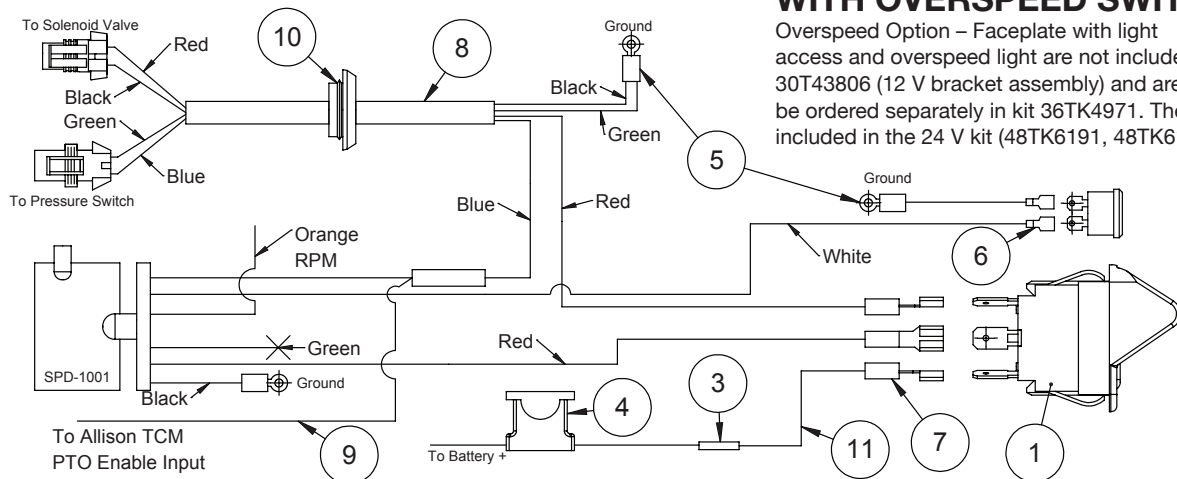
ITEM	QTY	PART NO.	DESCRIPTION
36	4	19T36588	Cap Screw
37	1	11T64141	Shaft Seal
38	1	12T34003	O-Ring
39	1	10T43097	Output Bearing
40*	1	15TA6359	"A" Output Assembly
		15TA6360	"B", "P", Output Flange (Wet spline version 15TA6379)
		15TA6361	"S", Output Flange (Wet spline version 15TA6380)
		15TA6363	"C", Output Flange (Wet spline version 15TA6381)
		15TA6378	"I", Output Flange
		15TA6365	"4", "2", "X" Output Flange
41	1	19T38266	Cap Screw
42	1	21T20092	Flat Washer
43	1	14T31499	1410 Companion Flange (Muncie "4")
	1	14T37498	DIN 120 Companion Flange (Muncie "2")

MC1 Installation Kits

Activation Plumbing Components Included in All Installation Kits Integral Solenoid Installation Kit (Non Muncie-Start® Units)



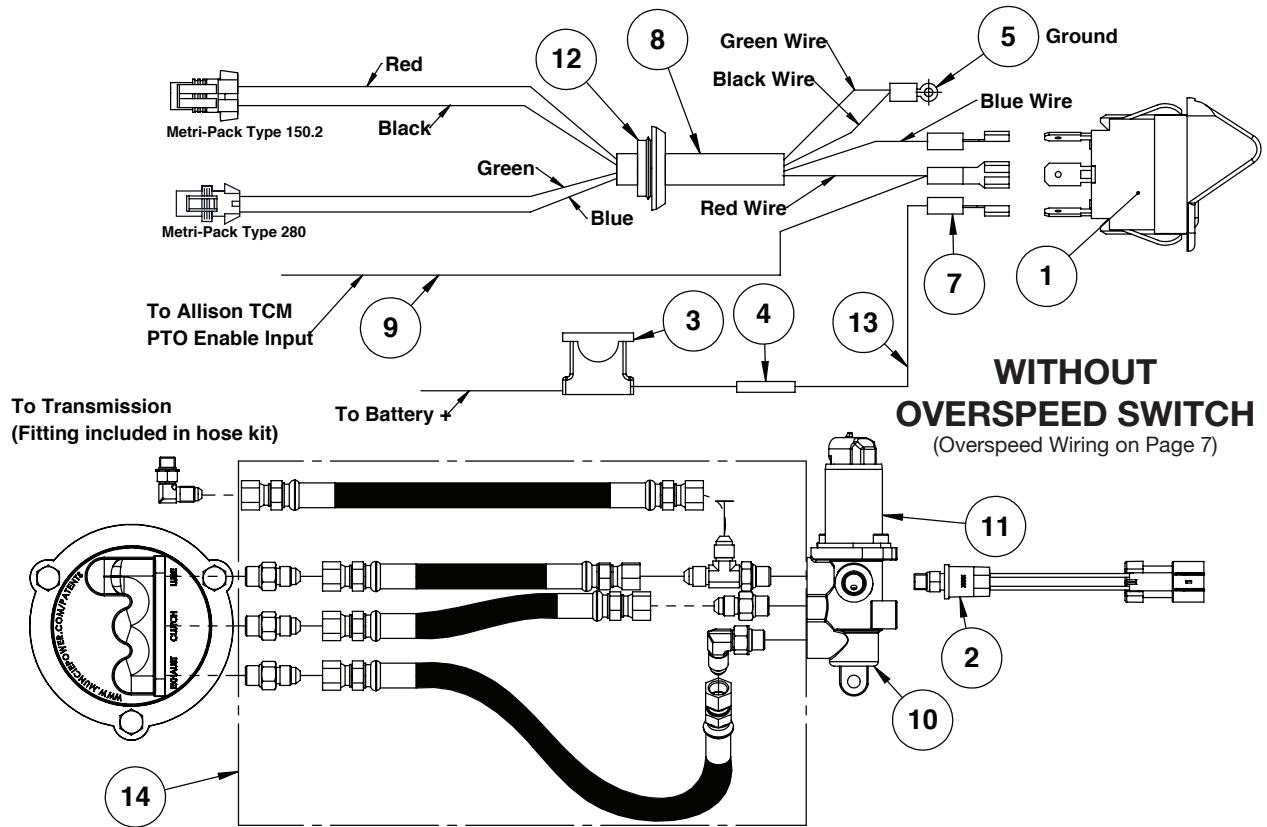
ITEM	P/N	DESCRIPTION	QUANTITY IN KIT			
			48TK6190 (HX***PX)	48TK6191 (JX***PX)	48TK6192 (HX***BX)	48TK6193 (JX***BX)
1	30T43806	12 V Switch Kit	1	-	1	-
	30T36453	24 V Switch Kit	-	1	-	1
2	30T60223	Pressure Switch	1	1	1	1
3	33T36299	10 Amp Fuse & Holder	1	1	1	1
4	34M18002	Butt Splice	1	1	1	1
5	34M18009	Ring Terminal	2	2	2	2
6	34M18187	3/16" Female Spade Terminal	2	2	2	2
7	34M18250	Female Spade Terminal	3	3	3	3
8	34T40902	Wire Harness	1	1	1	1
9	34T43180	Allison Input Cable	1	1	1	1
10	37T35674	Grommet	1	1	1	1
11	37T42506	6' Wire	1	1	1	1
12	43M68014	Lube Fitting	1	1	1	1
13	43TK3881	28" Hose Kit	1	1	-	-
	43TK3885	57" Hose Kit	-	-	1	1
N.S.	43T43712	Elbow	1	1	1	1
N.S.	20TK6353	Stud Kit	1	1	1	1
N.S.	13T35777	Allison 10-Bolt Gasket	1	1	1	1
N.S.	36MK3841	Safety Labels	1	1	1	1



MC1 Installation Kits

Activation Plumbing Components Included in All Installation Kits

Remote Solenoid Activation Kit (Non Muncie-Start® Units)

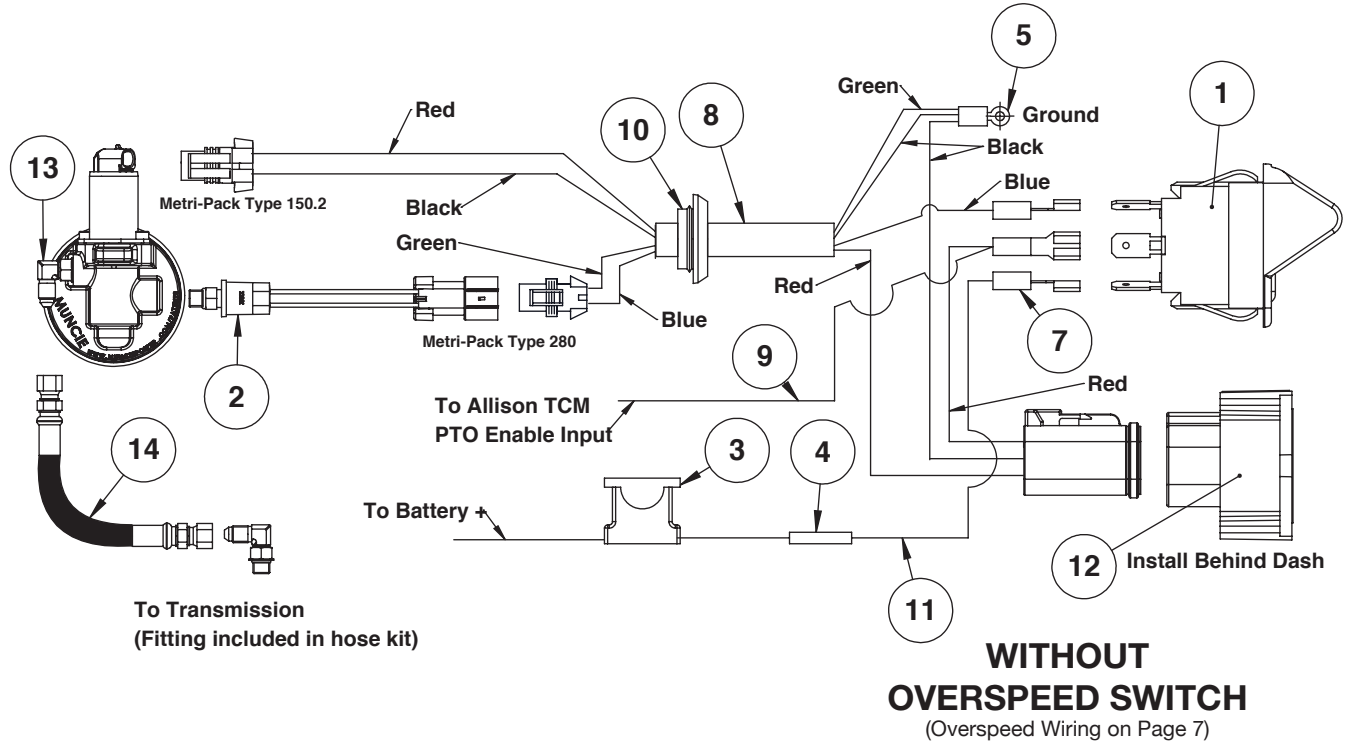


ITEM	P/N	DESCRIPTION	QUANTITY IN KIT	
			48TK6195 (HR***PX)	48TK6196 (JR***PX)
1	30T43806	12 V Switch Kit	1	-
	30T36453	24 V Switch Kit	-	1
2	30T60223	Pressure Switch	1	1
3	33T36299	10 Amp Fuse & Holder	1	1
4	34M18002	Butt Splice	1	1
5	34M18009	Ring Terminal	1	1
6	34M18187	3/16" Female Spade Terminal	2	2
7	34M18250	Female Spade Terminal	1	3
8	34T40902	Wire Harness	1	1
9	34T43180	Allison Input Cable	1	1
10	35T62632	Valve Body	1	1
11	35T43600	12 V Solenoid Valve	1	-
	35T43601	24 V Solenoid Valve	-	1
N.S.	19T62950	Solenoid Cap Screw	2	2
N.S.	49T62436	Solenoid Clamp Ring	1	1
12	37T35674	Grommet	1	1
13	37T42506	6' Wire	1	1
14	43TK6295	Hose Kit	1	1
N.S.	43T43712	Elbow	1	1
N.S.	19T36632	Cap Screw	2	2
N.S.	21T37991	Lock Washer	2	2
N.S.	22T35140	Hex Nut	2	2
N.S.	20TK6353	Stud Kit	1	1
N.S.	13T35777	Allison 10-Bolt Gasket	1	1
N.S.	36MK3841	Safety Labels	1	1

MC1 Installation Kits

Activation Plumbing Components Included in All Installation Kits

Integral Solenoid Installation Kit (Muncie-Start® Units)

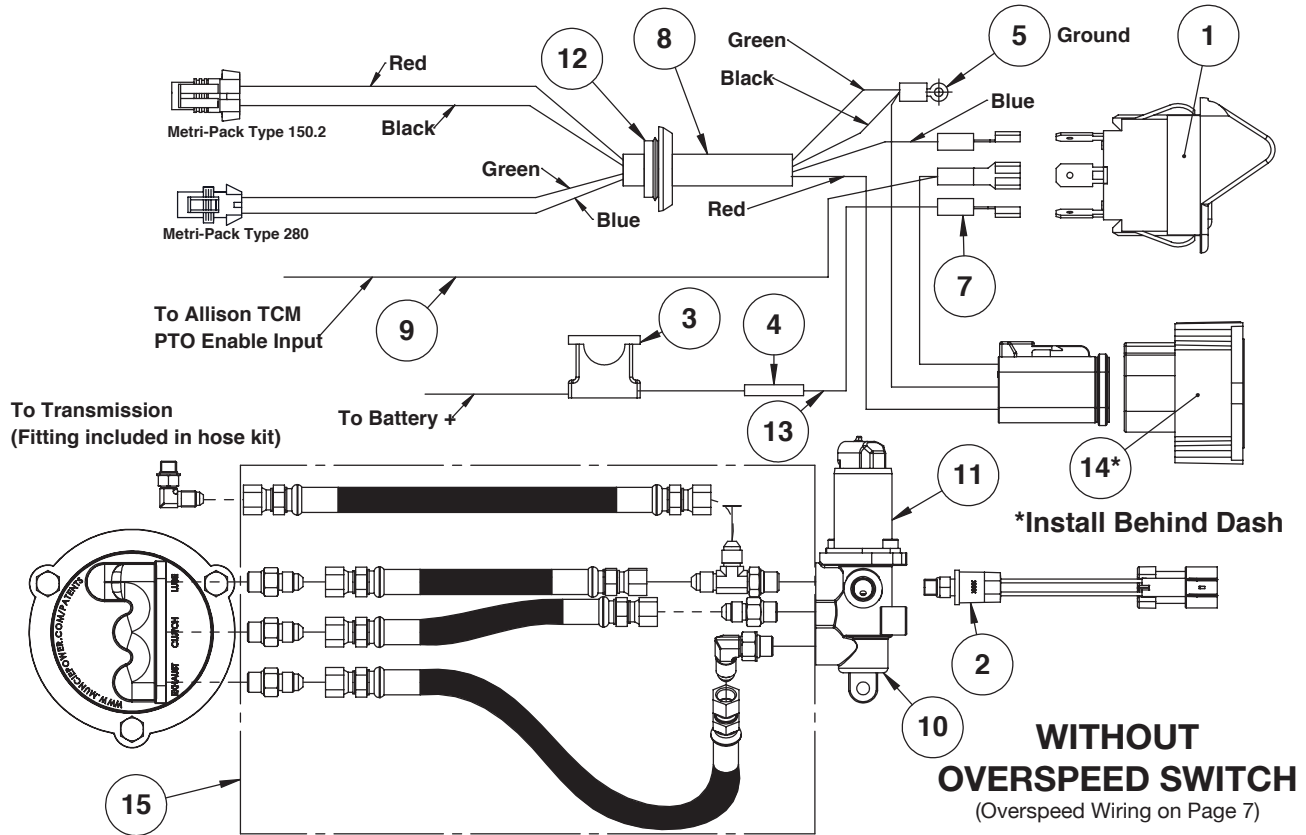


ITEM	P/N	DESCRIPTION	QUANTITY IN KIT	
			48TK6288 (SX***PX)	48TK6296 (SX***BX)
1	30T43806	12 V Switch Kit	1	1
2	30T60223	Pressure Switch	1	1
3	33T36299	10 Amp Fuse & Holder	1	1
4	34M18002	Butt Splice	1	1
5	34M18009	Ring Terminal	2	2
6	34M18187	$\frac{3}{16}$ " Female Spade Terminal	2	2
7	34M18250	Female Spade Terminal	3	3
8	34T43833	Wire Harness	1	1
9	34T43180	Allison Input Cable	1	1
10	37T35674	Grommet	1	1
11	37T42506	6' Wire	1	-
12	38T63052	Muncie-Start® Module 12 V	1	1
13	43M68014	Lube Fitting	1	1
14	43TK3881	28" Hose Kit	1	-
	43TK3885	57" Hose Kit	-	1
N.S.	43T43712	Elbow	1	1
N.S.	20TK6353	Stud Kit	1	1
N.S.	36MK3841	Safety Labels	1	1
N.S.	13T35777	Allison 10-Bolt Gasket	1	1

MC1 Installation Kits

Activation Plumbing Components Included in All Installation Kits

Remote Solenoid Activation Kit (Muncie-Start® Units)

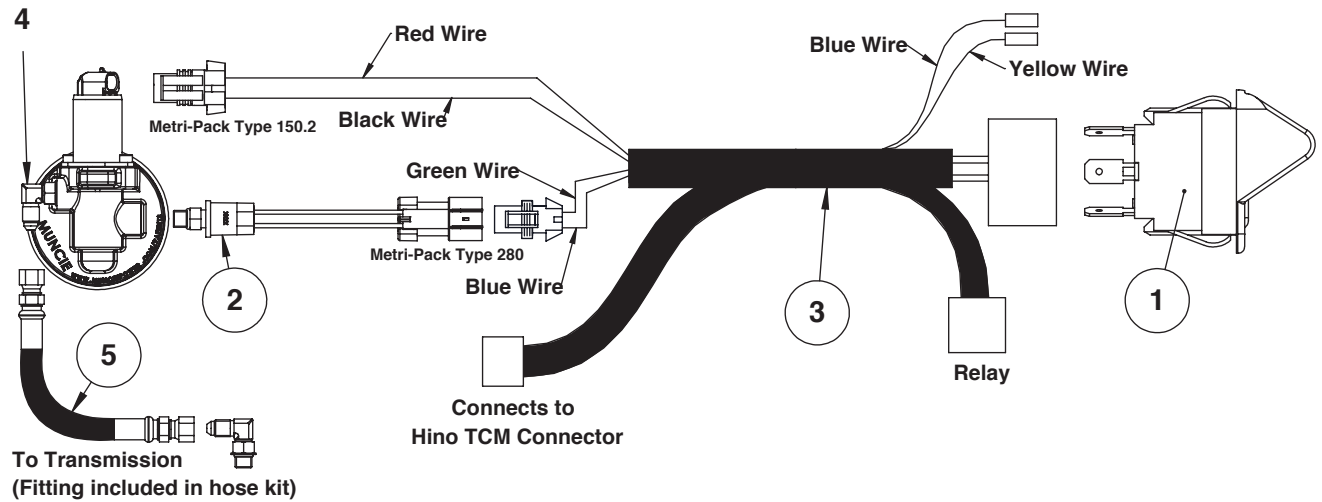


ITEM	P/N	DESCRIPTION	QUANTITY IN KIT
			48TK6297 (SR***PX)
1	30T43806	12 V Switch Kit	1
2	30T60223	Pressure Switch	1
3	33T36299	10 Amp Fuse & Holder	1
4	34M18002	Butt Splice	1
5	34M18009	Ring Terminal	1
6	34M18187	3/16" Female Spade Terminal	2
7	34M18250	Female Spade Terminal	1
8	34T40902	Wire Harness	1
9	34T43180	Allison Input Cable	1
10	35T62632	Valve Body	1
11	35T62496	12 V Solenoid Valve	1
N.S.	19T62950	Solenoid Cap Screw	2
N.S.	49T62436	Solenoid Clamp Ring	1
12	37T35674	Grommet	1
13	37T42506	6' Wire	1
14	38T63052	Muncie-Start® Module 12 V	1
15	43TK6295	Hose Kit	1
N.S.	43T43712	Elbow	1
N.S.	19T36623	Cap Screw	2
N.S.	21T37991	Cap Screw	2
N.S.	22T35140	Hex Nut	2
N.S.	20TK6353	Stud Kit	1
N.S.	13T35777	Allison 10-Bolt Gasket	1
N.S.	36MK3841	Safety Labels	1

MC1 Installation Kits

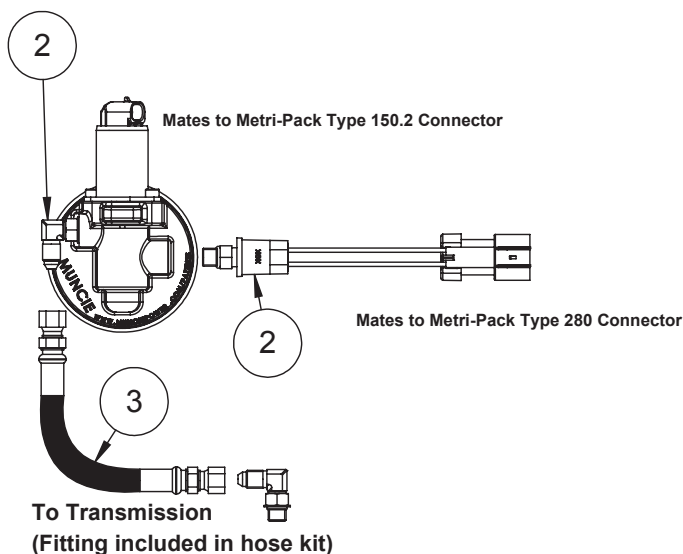
Activation Plumbing Components Included in All Installation Kits

Integral Solenoid Installation Kit for Hino Chassis (Non Muncie-Start® Units)



ITEM	P/N	DESCRIPTION	QUANTITY IN KIT	
			48TK6314 (HH***PX)	48TK6340 (JH***PX)
1	30T35687	12 V Rocker Switch	1	-
	30T36453	24 V Rocker Switch		1
2	30T60223	Pressure Switch	1	1
3	34T43651	Hino Wire Harness	1	1
4	43M68014	Lube Fitting	1	1
5	43TK3881	28" Hose Kit	1	1
N.S.	43T43712	Elbow	1	1
N.S.	20TK6353	Stud Kit	1	1
N.S.	13T35777	Allison 10-Bolt Gasket	1	1
N.S.	36MK3841	Safety Labels	1	1

Integral Solenoid Installation Kit – No Activation Components



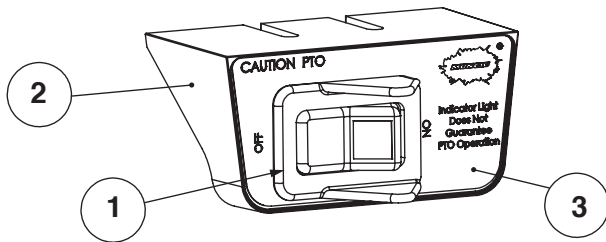
ITEM	P/N	DESCRIPTION	QUANTITY IN KIT
			48TK6194 (XX***PX)
1	30T60223	Pressure Switch	1
2	43M68014	Lube Fitting	1
3	43TK3881	28" Hose Kit	1
N.S.	43T43712	Elbow	1
N.S.	20TK6353	Stud Kit	1
N.S.	52MK1010	Allison 10-Bolt Gasket Kit	1
N.S.	36MK3841	Safety Labels	1

20TK6353 – Stud Kit

PART NO.	QTY	DESCRIPTION
MC18-03	1	Instruction
19T64314	8	Cap Screw
20T63321	2	Alignment Stud
21T64303	8	Flat Washers

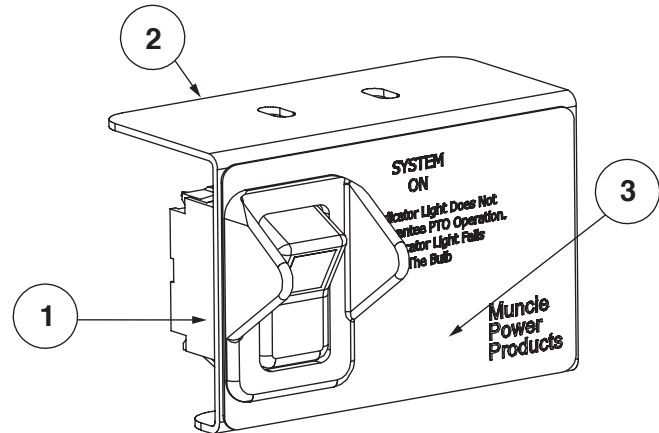
30T43806 – 12 V Switch Kit

Item	PART NO.	QTY	DESCRIPTION
1	30T35687	1	Rocker Switch
2	36T42362	1	Bracket
3	36T42380	1	Face Plate for Switch
N.S.	36MK5660	1	Bolt Kit

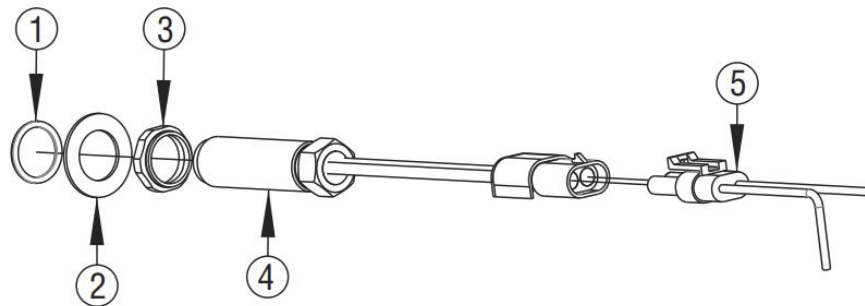


30T36453 – 24 V Switch Kit

Item	PART NO.	QTY	DESCRIPTION
1	30T35712	1	24 V Switch
2	36MA1005	1	Dash Bracket
3	36T36271	1	Face Plate
N.S.	36M01006	1	Face Plate
N.S.	34M16250	1	Female Spade Terminal
N.S.	36MK1007	1	Bolt Kit
N.S.	32MSR24V	1	24 V Red Light



Speed Sensor Kit – Option “U”

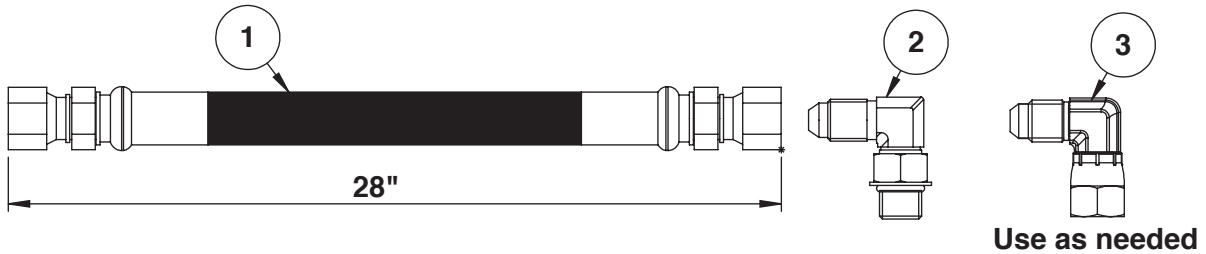


Speed Sensor Kit – 31TK3873

Item	PART NO.	QTY	DESCRIPTION
1	21T41900	1	Seal Washer
2	21T35603	1	Flat Washer
3	21T35109	1	Jam Nut
4	31T35108	1	Mag Pickup
5	34MA1415	1	Wiring Harness

43TK3881 – 28" Hose Kit

Item	PART NO.	QTY	DESCRIPTION
1	45T36274	1	28" Hose Assembly
2	43M68014	1	Lube Fitting
3	43T36445	1	Elbow Fitting



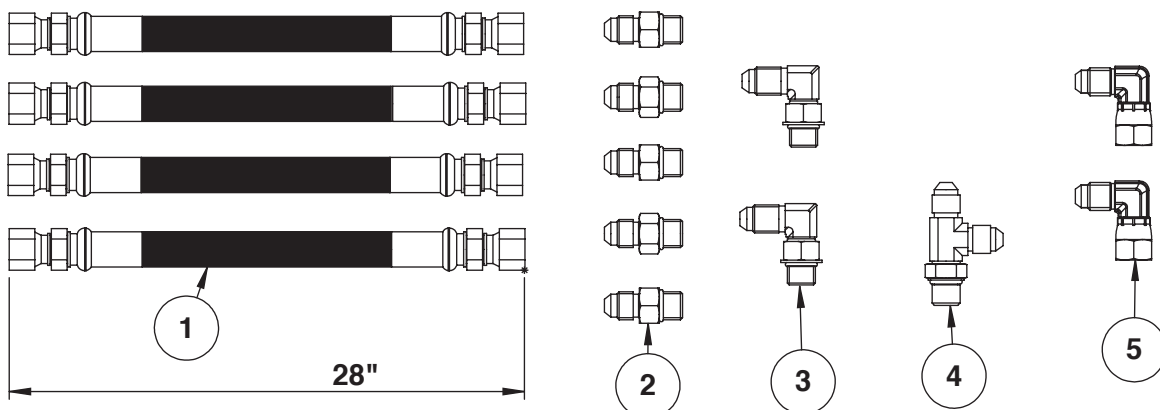
43TK3885 – 57" Hose Kit

Item	PART NO.	QTY	DESCRIPTION
1	45T36273	1	57" Hose Assembly
2	43M68014	1	Lube Fitting



43TK6295 – Remote Solenoid Hose Kit

Item	PART NO.	QTY	DESCRIPTION
1	45T36274	4	28" Hose Assembly
2	43T36431	5	Straight Adapter
3	43M68014	2	Lube Fitting
4	43T43628	1	Run Tee
5	43T36445	2	Elbow Fitting



MC1-GSK – MC1 Gasket Kit

(Gasket Kit items are marked with a “G” in detail views)

Item	PART NO.	QTY	DESCRIPTION
2	12T36472	1	O-Ring
5	12T36869	2	O-Ring
15	12T42978	1	Ring Seal
19	12T39023	2	O-Ring
22	12T36701	1	O-Ring
36	11T64141	1	Shaft Seal
37	12T34003	1	O-Ring

MC1-RBK-07A – MC1

Rebuild Kit

For 07–15 Ratio MC1 PTOs

(Rebuild Kit items are marked with a “R” in detail views)

MC1-RBK-05A – MC1

Rebuild Kit

For 05 & 06 Ratio MC1 PTOs

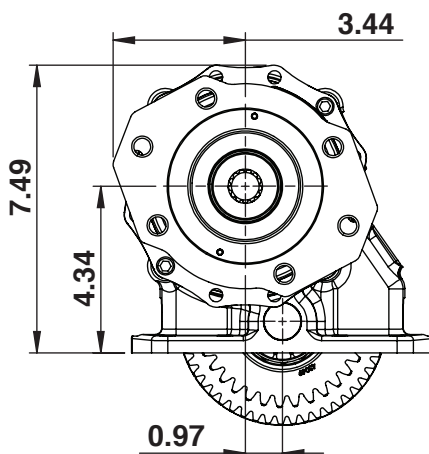
(Rebuild Kit items are marked with a “R” in detail views)

Item	PART NO.	QTY	DESCRIPTION
1	12T43296	1	Snap Ring
6	27T62870	1	Spring
7	49T33564	8	Spacer Disc
8	49T40641	7	Friction Disc
11	21T43294	1	Stepped Thrust Washer
45	21T63014	1	Thrust Washer
13	10T43603	1	Needle Bearing
14	12T43295	1	Snap Ring
16	10T43098	1	Tapered Bearing
21	18TK6341	1	Shim Kit
30	18T42642	2	Square Washer
31	10T43096	2	Input Bearing
33	27T43291	2	Belleville Washer
38	10T43097	1	Output Bearing
-	MC1-GSK	1	MC1 Gasket Kit

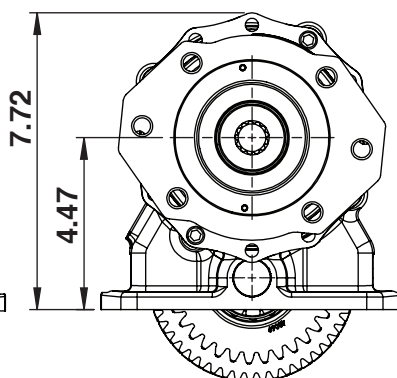
Item	PART NO.	QTY	DESCRIPTION
1	12T43296	1	Snap Ring
6	27T62870	1	Spring
7	49T33564	8	Spacer Disc
8	49T40641	7	Friction Disc
11	21T43294	1	Stepped Thrust Washer
45	21T63014	1	Thrust Washer
13	10T43603	1	Needle Bearing
14	12T43295	1	Snap Ring
16	10T43098	1	Tapered Bearing
21	18TK6341	1	Shim Kit
30	18T42642	2	Square Washer
31	10T43287	2	Input Bearing
33	27T43291	2	Belleville Washer
38	10T43097	1	Output Bearing
-	MC1-GSK	1	MC1 Gasket Kit

Dimensions

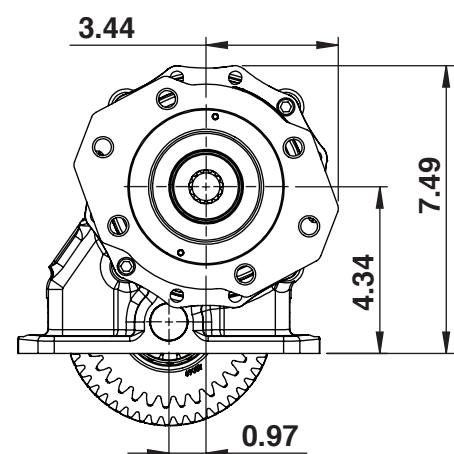
3 Arrangement



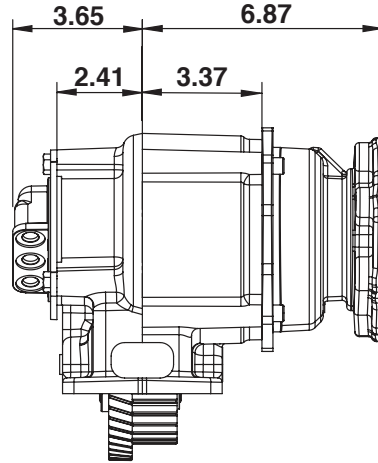
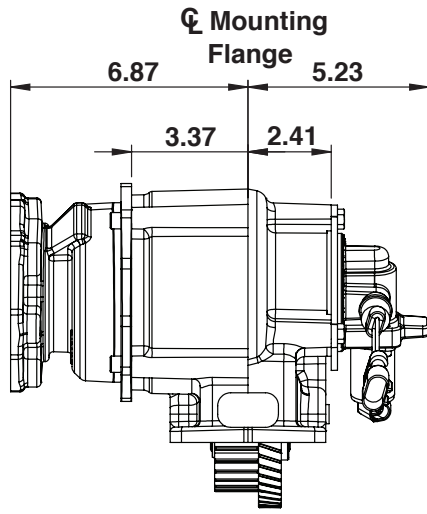
5 Arrangement



1 Arrangement

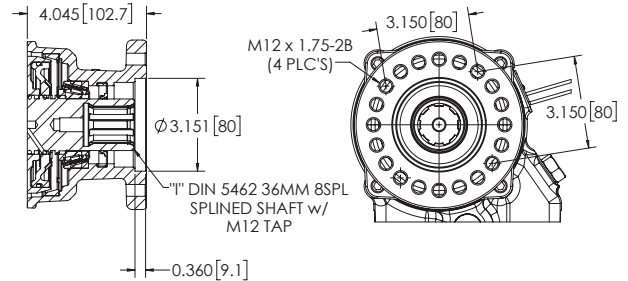
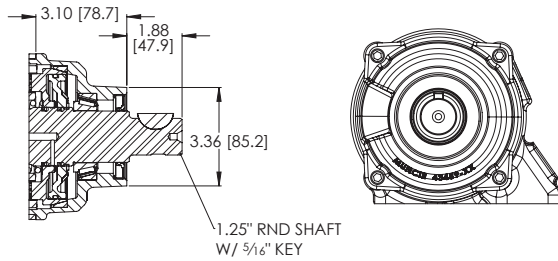


Dimensions continued



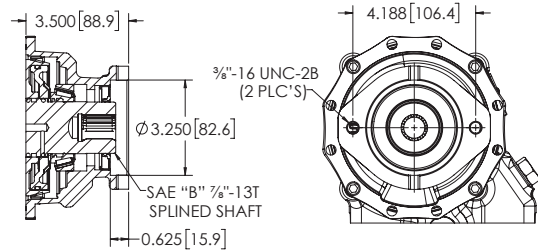
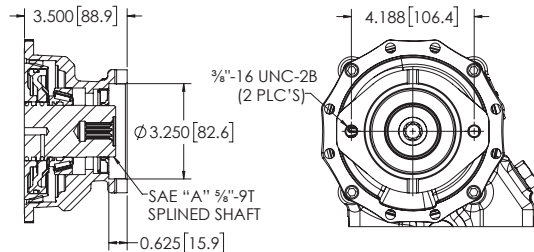
MC1 w/Integral Solenoid

MC1 w/Remote Solenoid



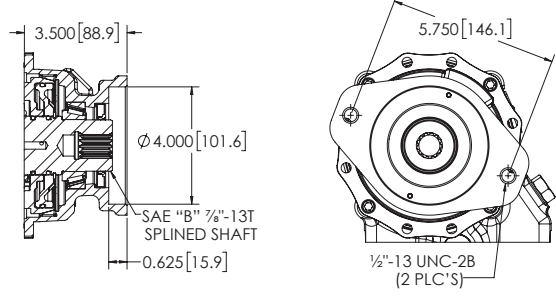
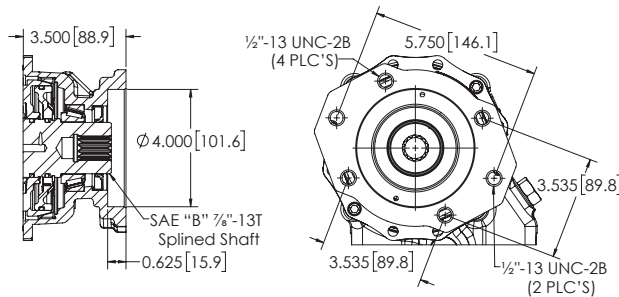
"1X" OUTPUT - 1 1/4" ROUND KEYED SHAFT

"2I" OUTPUT - DIN 5462 EURO WITH M12 TAP



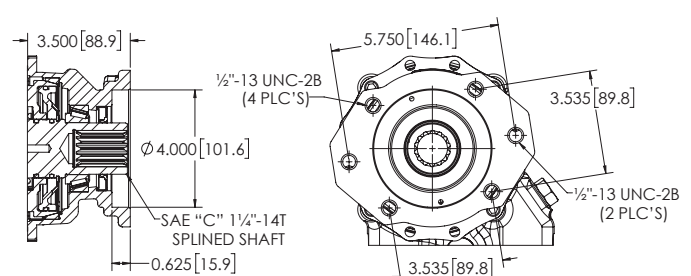
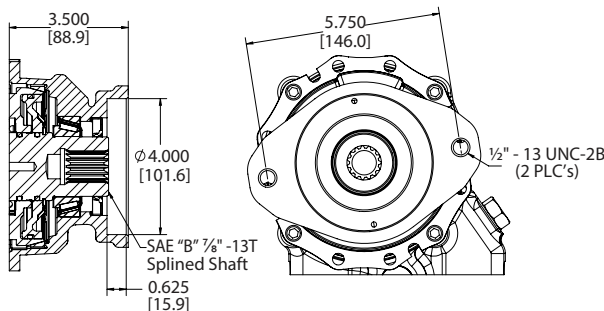
"AA" OUTPUT - SAE "A" 5/8" -9T SHAFT, 2-BOLT SAE-"A"

"BA" OUTPUT - SAE "B" 7/8" -13T, 2-BOLT FLANGE SAE-"A"



"BB" OUTPUT - SAE "B" 7/8" -13T, 2- & 4-BOLT SAE-"B"

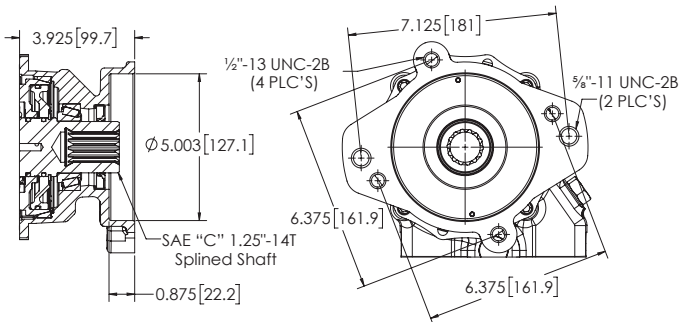
"BS" OUTPUT - SAE "B" 7/8" -13T SHAFT SAE "B" 2-BOLT



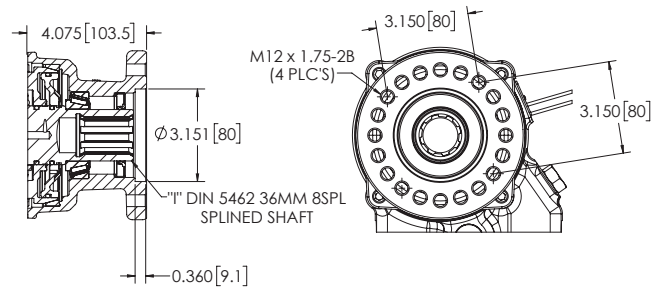
"B6" OUTPUT - Special SAE "B" 7/8" -13T, 2-Bolt SAE "B"

"CB" OUTPUT - SAE "C" 1 1/4" -14T, SAE "B"
NOTE: Only used with extended shaft.

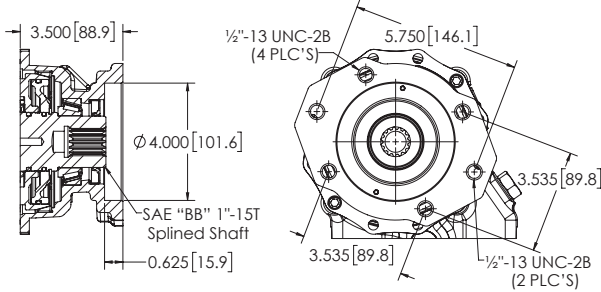
Dimensions continued



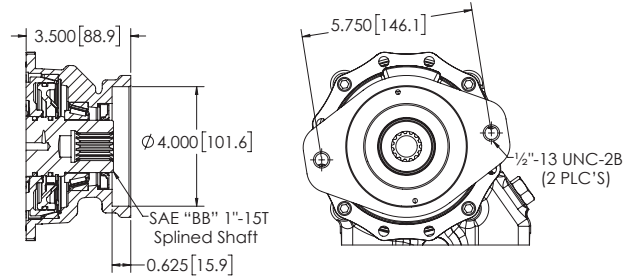
“CC” OUTPUT - SAE “C” 1 1/4" -14T, 2- & 4-BOLT SAE “C”



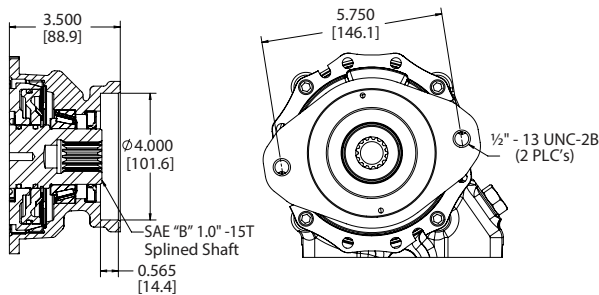
“II” OUTPUT - DIN 5462



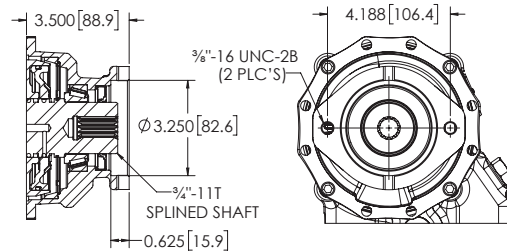
“PB” OUTPUT - SAE “BB” 1" -15T, 2- & 4-BOLT SAE “B”



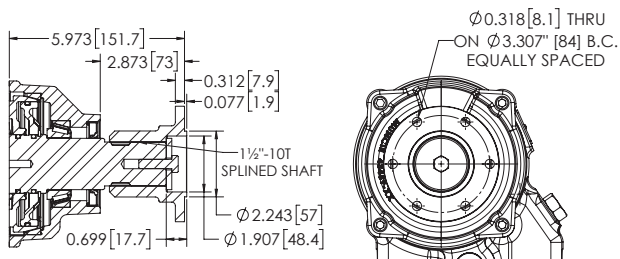
“PS” OUTPUT - SAE “BB” 1" -15T, 2-BOLT SAE-“B”



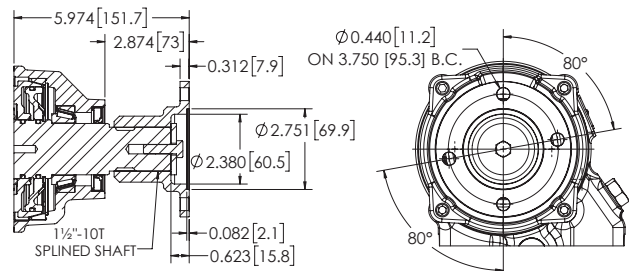
“P6” OUTPUT - SAE “BB” 1.0" -15T, 2-BOLT SAE “B Special”



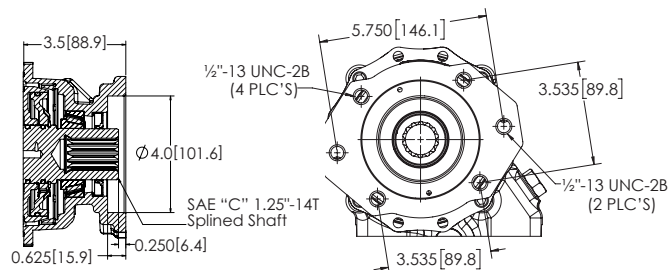
“TA” OUTPUT - SAE 3/4" -11T, 2-BOLT SAE “A”



“X2” OUTPUT - 1 1/2" -10T, DIN Companion Flange



“X4” OUTPUT - 1 1/2" -10T, 1410 Companion



“ZB” OUTPUT - SAE “C” 1.25" -14T, 2- & 4-BOLT SAE “B”



A Member of the Interpump Group

SP16-06 (Rev. 04-22)

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