OFF-HIGHWAY AXLE

People Finding A Better Way
These Spicer Transfer Cases are adaptable to meet mid-ship mount and stationary applications in addition to direct mount to a variety of Spicer transmissions which provides an integral assembly for more efficient vehicle use.

On sand, ice, snow, mud or severe grades, there is nothing like all-wheel drive to take you through really tough terrain. With our transfer case, you can take your big trucks to where the work is, simply by pulling a lever and engaging the front wheel drive. You don’t have to bring the work to the trucks . . . take the trucks to the work.

Spicer® Transfer Cases should be standard equipment on most “all-purpose” vehicles such as lumber fleets, snow plow vehicles and oil field hauling because it delivers maximum power in all transmission speeds.

Spicer Transfer Cases can be coupled directly to a Spicer auxiliary transmission. It provides full torque capacity to both front and rear axles.

Conventionally geared in a 1:1 ratio, the unit features spur gears throughout. An optional front wheel disconnect is available to allow disengagement when all-wheel drive is not required. The disconnect is available in manual, or air with an electrical indicator switch.

Spicer Transfer Cases give you the rough terrain versatility you need to provide a real “all purpose” vehicle. All-wheel drive when and where you need it . . . disconnect features for use when all wheel drive isn’t needed or where additional power flow options are desired.

**TRANSFER CASE APPLICATIONS**

Spicer Transfer Cases are used in the following vehicles:

- TRANSIT MIXERS
- LOGGING UNITS
- DUMP AND BLOCK TRUCKS
- FIRE TRUCKS
- MILITARY VEHICLES
- OIL AND WATER DRILLING RIGS
- AGRICULTURE AND MINING TRUCKS
- and MANY MORE
FEATURES AND BENEFITS

Ball bearing mounted gears and shafts prevent premature malfunctions.

Available with customer specified end yokes or companion flanges.

One piece construction provides rigidity necessary to withstand off highway usage.

Available with forced lubrication provisions.

Versatile design offers many configurations for customer requirements.

Constant mesh gears assure long life.

Customer can specify two different shift operations.

Available with integral Spicer Auxiliary transmissions.

TRANSFER CASE TORQUE RATINGS

Continuous Duty Torque Rating — 3725 lb-ft.
Manual Transmission Low Gear Net Torque Rating (Based on 85% Efficiency) — 10,000 lb-ft.
Automatic Transmission Stall Torque Rating = 11,000 lb-ft. (Stall Torque Value to be taken from Engine-Transmission Performance Curve).

Drop Gear Ratio — 1:1
Maximum Operating Speed = 5000 RPM

The maximum torque at the transfer case can be limited by either the engine capacity or the vehicle wheel skid. All applications must be approved by our Engineering Department.
738 MODEL NUMBER CONSTRUCTION — REMOTE MOUNT

Basic Model

A — Remote Mount less Speedo

**FLANGE and END YOKE LISTING**

N = No output (Blanked off)
P = No flange, output (Paper sleeve)
0 = 5-1-2541, 1610 Series Flange
1 = 5-1-4641X, 1610 Series Flange with Slinger
2 = 6-1-1731, 1710 Series Flange
3 = 6-1-4091X, 1710 Series Flange with Slinger
4 = 6.5-1-481, 1810 Series Flange
5 = 6.5-1-1471X, 1810 Series Flange with Slinger
6 = 6-4-3031, 1710 End Yoke
7 = 6-4-3461X, 1710 End Yoke with Slinger
8 = 6.5-4-1971, 1810 End Yoke
9 = 6.5-4-2831X, 1810 End Yoke with Slinger
X = 5-4-4751X, 1610 End Yoke with Slinger
Y = 6-1-1481, 1710 Series Flange

WEIGHT — 430 lbs.

NOTE: CW Input Pump = 378889-1 (F)
CCW Input Pump = 378853-1 (G)
RECOMMENDED LUBRICANTS

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<tr>
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<tr>
<td>Below 0°F</td>
<td>SAE 80</td>
<td></td>
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738 MODEL NUMBER CONSTRUCTION — DIRECT MOUNT

B = Direct Mount w/Speedo-3T & 12T
C = Direct Mount w/Speedo-4T & 12T
D = Direct Mount w/Speedo-3T & 14T
E = Direct Mount without Speedo

T = Trunnion available with 738B, C, D, & E only

No Symbol
Less Trunnion

Basic Model No.

*FLANGE and END YOKE LISTING
N = No output (Blanked off)
P = No flange, output (Paper sleeve)
0 = 5-1-2541, 1610 Series Flange
1 = 5-1-4641X, 1610 Series Flange with Slinger
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9 = 6.5-4-2831X, 1810 End Yoke with Slinger
X = 5-4-4751X, 1610 End Yoke with Slinger
Y = 6-1-1481, 1710 Series Flange

WEIGHT — 430 lbs.

LUBRICANT LEVEL

Oil Capacity — 11 Pints Approx.
AVAILABLE SPEEDOMETER GEAR SETS

<table>
<thead>
<tr>
<th>DRIVE GEAR</th>
<th>DRIVEN GEAR</th>
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<tbody>
<tr>
<td>B 70-452-5 (3 T.) (S.W. 447077)</td>
<td>70-453-2 (12 T.) (S.W. 70209)</td>
</tr>
<tr>
<td>C 70-452-6 (4 T.) (S.W. 447120)</td>
<td>70-453-4 (12 T.) (S.W. 448193)</td>
</tr>
<tr>
<td>D 70-452-8 (3 T.) (S.W. 447182)</td>
<td>70-453-1 (14 T.) (S.W. 65949)</td>
</tr>
<tr>
<td>E 70-452-8 (3 T.) (S.W. 447182)</td>
<td>NONE</td>
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</table>

OPTIONAL SPICER AUXILIARY TRANSMISSIONS

<table>
<thead>
<tr>
<th>R8031R</th>
<th>R8341F</th>
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<tr>
<td>R8341C</td>
<td>R8341G</td>
</tr>
<tr>
<td>R8341D</td>
<td>R8341K</td>
</tr>
<tr>
<td>R8341E</td>
<td>R8341L</td>
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NOTE: Oils Meeting MIL-L-2104B or MIL-L-45199 are also acceptable.

Heavy Duty Engine Oil Meeting MIL-L-2104C or MIL-L-46152
**784 MODEL NUMBER CONSTRUCTION — REMOTE MOUNT**

Basic Model

Upper Rear Output
* See flange listing below
0 thru 9, P, X, Y

Upper Rear Output
Shifter Options
M = Manual shift with switch
E = Air shift with switch

Lower Rear Output
* See flange listing below
0 thru 9, N, P, X, Y

**FORCED LUBE**

- Forced Lube = F, CW
- Forced Lube = G, CCW

Upper Front Output
* See flange listing below
0 thru 9, N, P, X, Y

Lower Front Input
* See flange listing below
0 thru 9, N, P, X, Y

Lower Rear Output
Shifter Options
M = Manual shift with switch
E = Air shift with switch
L = Less shifter

**NOTE:**
CW Input Pump = 378889-1 (F)
CCW Input Pump = 378853-1 (G)

*FLANGE and END YOKE LISTING*

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- 7 = 6-4-3461X, 1710 End Yoke with Slinger
- 8 = 6.5-4-1971, 1810 End Yoke
- 9 = 6.5-4-2831X, 1810 End Yoke with Slinger
- X = 5-4-4751X, 1610 End Yoke with Slinger
- Y = 6-1-1481, 1710 Series Flange

**WEIGHT** — 460 lbs.

**LUBRICANT LEVEL**

Oil Capacity — 11 Pints Approx.

**VERTICAL MOUNTED**

**HORIZONTAL MOUNTED**
RECOMMENDED LUBRICANTS

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**785 MODEL NUMBER CONSTRUCTION — REMOTE MOUNT**

Basic Model

Upper Rear Output
*See flange listing below
0 thru 9, P, X, Y

Upper Rear Output
Shifter options
M = Manual shift with switch
E = Air shift with switch

Lower Rear Output
*See flange listing below
0 thru 9, P, X, Y

Lower Rear Output
Shifter options
M = Manual shift with switch
E = Air shift with switch

Forced Lube = F, CW
Forced Lube = G, CCW

Upper Front Input
*See flange listing below
0 thru 9, N, P, X, Y

Lower Front Output
Shifter options
M = Manual shift with switch
E = Air shift with switch

Lower Front Output
*See flange listing below
0 thru 9, P, X, Y

**NOTE:**
CW Input Pump = 378889-1 (F)
CCW Input Pump = 378853-1 (G)

*FLANGE and END YOKE LISTING*

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X = 5-4-4751X, 1610 End Yoke with Slinger
Y = 6-1-1481, 1710 Series Flange

**WEIGHT — 570 lbs.**

**LUBRICANT LEVEL**

Oil Capacity —
11 Pints Approx.
RECOMMENDED LUBRICANTS

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**791 MODEL NUMBER CONSTRUCTION — REMOTE MOUNT**

- **Basic Model**
- **Upper Rear Output**
  - Shifter options
  - M = Manual shift with switch
  - E = Air shift with switch
  - *See flange listing below*
  - 0 thru 9, P, X, Y
- **Lower Front Output**
  - Shifter options
  - M = Manual shift with switch
  - E = Air shift with switch
  - *See flange listing below*
  - 0 thru 9, P, X, Y

**Forced Lube**
- F, CW
- G, CCW

**Upper Rear Input**
- No Output Only

**Upper Front Output**
- No Output Only

**Lower Front Output**
- *See flange listing below*
  - 0 thru 9, P, X, Y

**Note:**
- CW Input Pump = 378889-1 (F)
- CCW Input Pump = 378853-1 (G)

**Flange and End Yoke Listing**
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- 9 = 6.5-4-2831X, 1810 End Yoke with Slinger
- X = 5-4-4751X, 1610 End Yoke with Slinger
- Y = 6-1-1481, 1710 Series Flange

**Weight** — 500 lbs.

**Lubricant Level**
- **Vertical Mounted**
  - Oil Level Plug
  - Oil Capacity — 11 Pints Approx.

- **Horizontal Mounted**
  - Oil Level Plug
### RECOMMENDED LUBRICANTS

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792 MODEL NUMBER CONSTRUCTION — REMOTE MOUNT

Basic Model

Upper Rear Output
*See flange listing below
0 thru 9, P, X, Y, N

Upper Rear Output
Shifter options
M = Manual Shift with switch
E = Air Shift with switch
L = Less Shifter

Lower Rear Output
*See flange listing below
0 thru 9, P, X, Y, N

Lower Rear Output
Shifter options
M = Manual shift with switch
E = Air shift with switch
L = Less Shifter

Forced Lube = F, CW
Forced Lube = G, CCW

Upper Front Output
*See flange listing below
0 thru 9, P, X, Y

Upper Front Output
Shifter Options
M = Manual shift with switch
E = Air shift with switch

Lower Front Input
*See flange listing below
0 thru 9, P, X, Y

Lower Front Output

NOTE: CW Input Pump = 378889-1 (F)
CCW Input Pump = 378853-1 (G)

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9 = 6.5-4-2831X, 1810 End Yoke with Slinger
X = 5-4-4751X, 1610 End Yoke with Slinger
Y = 6-1-1481, 1710 Series Flange

WEIGHT - 520 lbs.

LUBRICANT LEVEL

Oil Capacity — 11 Pints Approx.

VERTICAL MOUNTED

HORIZONTAL MOUNTED
### RECOMMENDED LUBRICANTS

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NOTE: Oils Meeting MIL-L-2104B or MIL-L-45199 are also acceptable.
DISCONNECTS FOR SPICER® HEAVY-DUTY TRANSFER CASES

The new disconnect requires air to both engage and disengage the output. A detent is added on the shifter spool to maintain position if air supply is lost. There is also a manual shift option available for this new design with an indicator light switch being standard on both. The line drawings illustrate both options in detail.

The controls inside the cab will need to be a 4-way valve so that air can be supplied to either side of the piston in the disconnect. The indicator light switch needs to be wired from the battery (or another source) to one terminal and also to a light in the cab. The light should be "ON" when the disconnect is engaged. Air pressure to shift is 40 PSI minimum while the manual requires a pull of 125 lbs. at the spool end.
TRANSFER CASE LUBE PUMPS

Spicer Heavy Axle Division will analyze your application requirements to determine proper utilization of transfer case lube pumps.

738 A, B, C, D, or E: OPTIONAL EQUIPMENT

The lube pump is an option on the above transfer cases. When input to the transfer case is less than 1000 RPM (continuous) a lube pump is recommended. Use of a lube pump allows the transfer case to operate at 300 RPM minimum (continuous). Pump rotation is determined by viewing rotation at input shaft of pump.

784, 785, 791, and 792: STANDARD EQUIPMENT

The lube pump is standard equipment on the above models due to their heavy duty use as stationary power-take-offs. The lube pump direction of rotation still must be signified at the end of the model number.
ORIENTATION OF MOUNTING HOLES TO INPUT AND OUTPUT CENTER LINES FOR TRANSFER CASE
OTHER DRIVES

Spicer® transfer cases are engineered for applications in many industries where mobile and/or stationary power transmission is used. Wherever gear reduction is required, we have the right unit or we can custom design one to fit your needs. Put our engineering and design knowledge to work for your application by contacting your local Spicer Sales Representative.

PERFORMANCE ASSURANCE

Rated torque and speeds of our products are provided in current catalogs to assist the buyer in selecting the proper product. In addition, application assistance is offered by our engineers for guidance to the buyer in selection of a catalog product and for design and application of custom designs. Since the actual performance characteristics of all our products in the buyer's application is the responsibility of the buyer, performance assurance is usually accomplished through manufacture of a prototype by us, and a test or qualification program on the part of the buyer.

HEAVY EQUIPMENT DRIVES WARRANTY

Dana Corporation, Spicer Heavy Axle Division, guarantees all its products will leave the factory in good condition. Dana Corporation warrants its Transfer Cases against defects in workmanship and materials for a period of 180 days or 1500 hours whichever occurs first, from the time (not to exceed two (2) years) the product is placed in service. Adjustments under this warranty will be made only after completion of inspection of the part or product. Our liability under the warranty shall extend only to the replacement or correction of any defective part or product determined by our inspection as not conforming to this warranty. All material must be returned freight prepaid.

This warranty shall not apply to any product which shall have been repaired or altered without our knowledge and consent or operated or installed contrary to our instruction or subjected to misuse, improper maintenance or is damaged by accident or negligence.

THIS WARRANTY IS MADE IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND THERE ARE NO OTHER WARRANTIES THAT EXTEND BEYOND THIS EXPRESS WARRANTY.

Dana Corporation, Spicer Heavy Axle Division, reserves the right to discontinue models or to change specifications at any time without notice. No discontinuance or change shall create any liability on the part of the Dana Corporation in respect to its products in the hands of its customers or products on order not incorporating such change even though delivered after any such change.

Specifications, descriptions and illustrative material contained herein were as accurate as known at the time this publication was approved for printing. Dana Corporation reserves the right to discontinue models at any time or change specifications or design without notice or without incurring obligation.
APPLICATION POLICY

Capability ratings, features and specifications vary depending upon model, type of application and type of service. Application approvals must be obtained from Spicer. Spicer specifications are subject to change without notice.